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THE FRAMINGHAM STUDY

An Epidemiological Investigation
of
Cardiovascular Disease

Section 25

Survival Following Certain Cardiovascular Events

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THE FRAMINGHAM STUDY

An Epidemiological Investigation of Cardiovascular Disease

Editors: William B. Kannel, M.D. and Tavia Gordon

Section 25. Survival following certain cardiovascular events.

Joyce Schiffman

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Survival Following Certain Cardiovascular Events: The Framingham Study

More than half of the deaths occurring each year in the United States are assigned to cardiovascular causes. While an extensive literature exists regarding prognosis and survival in these diseases, the literature is surprisingly primitive when compared with that for cancer survival. For some of the cardiovascular diseases the information available regarding survival in the general population is, for all practical purposes, non-existent. Biorck, speaking of cardiac diseases, states "Recommendations as to therapy are often haphazardly given and results of treatment presented, without much consideration of the natural course of the disease and its prognosis. Opinions regarding prophylactic measures are likewise often expressed without real understanding of its influence on the natural history of the disease."

In this report we present basic life tables for the following events: coronary heart disease, coronary attacks, angina pectoris uncomplicated, myocardial infarction, congestive heart failure, cerebrovascular accident, brain infarction, and intermittent claudication. This report takes no account of the course of events subsequent to the initial episode other than to account for deaths. The population from which this experience was derived was the Framingham population. In 1948 the U.S. Public Health Service undertook to study the factors associated with the development of atherosclerotic and hypertensive cardiovascular

disease by a long-term surveillance of the adult population of Framingham, Massachusetts. Some 2336 men and 2873 women between the ages of 30 and 62 at their initial examination have been recalled for examination every two years. The cohort has been very cooperative in returning for examinations. Except for the initial reexamination, the net loss on successive examinations has been very low. If a subject did not take a certain examination considerable effort was made to keep track of his clinical status by obtaining hospital records, death certificates, physicians' reports, and information from relatives. If an event was discovered it was assigned to the appropriate examination. However, a clinic examination was required for the diagnosis of certain events such as angina pectoris uncomplicated and intermittent claudication.

The time scale used in reporting survival data is two-year intervals, the time between one examination and the next. Sixteen years of followup data through the ninth biennial examination are presented. The life table data are presented for each event by age and sex at diagnosis. A subject was included in a life table cohort if he was diagnosed as having experienced an event for the first time at any of the examinations 2 through 8. The cases diagnosed at Exam 1 were not included in the tables since subjects with a preexisting condition would not necessarily have the same survival experience as subjects who experienced an event *de novo*.

Clearly, for some diseases the gross time scale used in this report can be very misleading; particularly when it is desired to compare the Framingham experience with that from other populations. In myocardial infarction, for example, the heaviest mortality occurs very shortly after the event, and life tables based on shorter time intervals are therefore most desirable. On the other hand some events (such as the first appearance of APU or IC) can ordinarily be dated no more precisely than to say that they were not reported on one examination but were reported on the next. In comparing survival experience for these events with that for events (such as MI) which can ordinarily be more precisely dated, the time scale represented by exam intervals is actually preferable to a fine time scale. Moreover, since most events of APU or IC are recorded only if the subject appears for examination after the event, it is difficult to assign a clear meaning to survival prior to the first examination after such events. Even for other diseases, such as MI, a similar dilemma is evident. The silent infarct is ordinarily defined by ECG findings at the time of the clinic examination. If the experience of persons with silent infarcts is to be compared with or pooled with that of clinically manifest infarction we must assess mortality for both from the time of the clinic examination where the event was first manifest.

Therefore, life tables are presented in two forms. Those lettered "A" were prepared so that the survival experience of subjects who experienced a cardiovascular event could be compared. The "A" tables do not include subjects who had an event and died in the same

exam interval. For example, suppose a subject had an MI after he took Exam 6 and died before he took Exam 7. This subject may also have acquired IC after Exam 6, but this information is not likely to be known. By excluding these cases from the "A" tables this bias, caused by the fact that for diagnosis of some events (IC and APU) a subject had to be alive to take an exam, was eliminated. The tables lettered "B" include those subjects who died and were diagnosed as having experienced an event in the same exam interval. "B" tables were not computed for the events IC and APU. These "B" tables, although not appropriate for comparisons with IC and APU are better indicators of the total mortality experience of subjects with the specified event.

Thus, the "A" tables in this report will continue to serve a number of important functions even after life tables for Framingham are available based on finer time intervals. Until that time, the "B" tables which include mortality experience from the same interval in which the event first occurred can be considered as first-order approximations to a complete survival experience.

The questions to be pondered are the following:

(1) If a person experiences a given cardiovascular event before one examination what is his probability of surviving to a subsequent examination?

(2) How does the mortality of individuals who have experienced an event compare to that of individuals of the same sex and age who are free of the event at a given time?

In order to answer the second question, life tables were constructed by sex and age for subjects who were free of a specified event at each examination so that the survival of those subjects who experienced an event in an examination interval could be compared with those persons of the same sex and age who were free of that event at the designated exam. These life tables of expected survival rates constructed from the Framingham Study population were used rather than general United States life tables since the Framingham population provides the most comparable reference group. The relative survival rate was then calculated as the ratio of the observed survival rate in the disease cohort to their expected survival rate. A relative survival rate of less than one indicated that mortality in the disease cohort exceeded that of persons in the general population free of the disease, a relative rate equal to one indicates that mortality in the disease cohort was equal to that in the general population, and a rate greater than one indicates that mortality in the disease cohort was less than in the general population.

LIFE TABLE COLUMN DEFINITIONS

Definitions of the columns headings used in the life tables follow.

I -- This column gives the number of exam intervals after diagnosis of an event, where one interval represents an exam interval of approximately two years of experience. For example, a person who was diagnosed as having APU at Exam 5 and died before Exam 6, died in the first exam interval after diagnosis, Interval 1. Likewise, a person who was diagnosed at Exam 2 and died between Exams 7 and 8 died in Interval 6. In the tables lettered "B" note that there is an Interval 0. This gives the mortality of subjects who died in the same interval in which a diagnosis was made. On the average, this interval represents one year of follow-up experience.

L -- This column designates the number of subjects with a given disease alive at the beginning of the Interval I. Thus the entry on the first line of this columns represents those alive at the beginning of the first interval; i.e., those alive at diagnosis, and is the total number of patients in the cohort. Note that in the "A" tables the total number alive are those who were alive at the exam of diagnosis; in the "B" tables the total number alive represents all the subjects in the Framingham Study who experienced an event.

D -- In this column the number of subjects who died during an interval is entered.

W -- In this column the number of subjects who were withdrawn alive at the end of an interval is entered. The total number

withdrawn alive is the number of patients who were alive at the end of the 16-year follow-up; i.e., who were alive at Exam 9. The interval during which the subject is withdrawn from observations depends on the exam at which diagnosis was made. For example, if a subject was diagnosed at Exam 8 and was alive at Exam 9, then he was withdrawn alive at the end of the first interval after diagnosis, Interval 1.

Q -- The proportion of subjects who died or an estimate of the probability of dying during interval I is indicated in this column. It is obtained by dividing the number of persons who died during the interval by the number of persons alive at the beginning of the interval.

For any interval I then $Q(I) = \frac{D(I)}{L(I)}$

(In most of the literature the denominator is L'(I) where L'(I) designates the effective number exposed to the risk of dying. $L'(I) = L(I) - \frac{1}{2}(U(I) + W(I))$ where L(I) is the number of subjects alive at the beginning of the interval; U(I) is the number lost to follow-up; i.e., whose survival status was unknown as of the end of interval I; and W(I) is the number withdrawn during an interval. This formula assumes that the subjects who were lost or withdrawn were observed on the average for one half the interval since losses or withdrawals could be assumed to be equally distributed throughout the interval. This technique was not applicable in this study. First, there were nc subjects "lost to follow-up" since once a subject was diagnosed it was known if he was dead or alive

at Exam 9. Second, all the subjects were "exposed to the risk of dying" for an entire interval; withdrawals were not equally distributed throughout an interval since diagnosis and withdrawal occurred at exam dates. For example, if someone were diagnosed at Exam 6 and withdrawn alive at Exam 8 he would have been observed for an entire two intervals and withdrawn at the end of interval 2.)

P -- This column designates the proportion surviving, or an estimate of the survival rate during, interval I. It is obtained by subtracting the proportion dying during interval I from unity.

$$P(I) = 1 - Q(I)$$

CP -- This column gives the cumulative proportion surviving from diagnosis to the end of interval I. This estimate of the cumulative survival rate is obtained by multiplying the successive proportion surviving each interval. Thus, the probability of surviving three exam intervals is

$$CP_3 = P(1) \times P(2) \times P(3)$$

where it is assumed that survival rates for each interval (of two years) are independent.

SEP -- This column gives the standard error of the estimate P(I). It is calculated according to Greenwood's approximation (9).

$$SEP(I) = P(I) \sqrt{\frac{1 - P(I)}{L(I)\ P(I)}}$$

SECP -- This column is the standard error of CP(I), also calculated according to Greenwood's approximation.

$$SECP(I) = CP(I) \sqrt{\sum_{j=1}^{I} \frac{1 - P(J)}{L(J)\ P(J)}}$$

Life tables of those subjects free of an event at each exam were constructed so that survival experience of subjects who experienced an event at any given exam could be compared to the survival experience of persons who were free of that event at the exam. For example, if a man 47 years old developed CHD at Exam 3 his expected probability of surviving is estimated using a life table of Framingham men 45-49 years old who were free of CHD at Exam 3. For each subject in a disease cohort the appropriate "expected" probability was calculated in this way. Thus, for each event, "expected" life tables were constructed by sex and age for Framingham subjects free of the event at each exam. Using these reference tables relative survival rates were computed. The next columns in the tables concern the relative survival rates.

<u>R</u> -- $R(I) = P(I)/EP(I)$

where $R(I)$ is the relative survival rate in interval I. $P(I)$ is an estimate of the probability of surviving interval I from Column <u>P</u> $EP(I)$ is an estimate of the expected probability of surviving interval I in the Framingham population initially free of the specified disease.

$$EP(I) = \frac{1}{L(I)} \sum_{J=1}^{L(I)} \tilde{P}(J)$$

where $\tilde{P}(J)$ represents the expected probability of surviving interval I for each individual who entered the interval alive.

$L(I)$ is the number of subjects who entered the interval alive from Column <u>L</u>.

CR -- $CR(I) = CP(I)/ECP(I)$

where $CR(I)$ is the relative cumulative survival rate. $CP(I)$ is an estimate of the cumulative survival rate from Column CP. $ECP(I)$ is an estimate of the expected cumulative survival rate.

$$ECP(I) = \frac{1}{\tilde{N}(I)} \sum_{J=1}^{\tilde{N}(I)} \tilde{CP}(J)$$

where $\tilde{CP}(J)$ represents the expected probability of surviving from diagnosis through interval I for each individual in the sum. $\tilde{N}(I)$ is the total number of individuals in the cohort except those who would be withdrawn alive before interval I if there were no deaths in the cohort.

SR -- $SR(I) = R(I)\sqrt{\frac{1 - P(I)}{L(I) \quad P(I)}}$

where $SR(I)$ is an approximation of the standard error of $R(I)$ using Greenwood's formula and assuming that the expected probabilities are constants. (The standard error of the expected probabilities are actually about .001 to .003). Thus this is an underestimate of the true standard error.

SCR -- $SCR(I) = CR(I)\sqrt{\sum_{J=1}^{I} \frac{1 - P(J)}{L(J) \; P(J)}}$

where $SCR(I)$ is an approximation of the standard error of $CR(I)$.

It is possible to obtain an estimate of the average annual mortality rate from the tables.

$$\hat{f}(I) = \frac{CP(I-1) - CP(I)}{2}$$

where $\hat{f}(I)$ is an estimate of the average annual mortality rate

in interval I. CP(I-1) is the cumulative survival rate in interval I-1 (CP(0)=1). CP(I) is the cumulative survival rate in interval I. It is necessary to divide by 2 since each interval represents two years. Thus to compute the average annual mortality rate in the first or second year after diagnosis (15):

$$\hat{f}(1) = \frac{1 - CP(1)}{2}$$

or to compute the average annual mortality rate in the fifth or sixth year (the third exam interval) after diagnosis:

$$\hat{f}(3) = \frac{CP(2) - CP(3)}{2} .$$

DISCUSSION

Coronary Heart Disease (CHD)

Coronary heart disease was defined as the development of definite myocardial infarction, coronary insufficiency, angina pectoris, sudden death or non-sudden death from CHD in persons free from previous evidence of the disease. Definitions of angina pectoris and myocardial infarction appear in the next two parts of this section. Coronary insufficiency was designated when a history of prolonged ischemic chest pain was accompanied by transient ischemic S-T segment and T-wave abnormality on the ECG--not accompanied by development of Q-wave abnormality on the ECG or by serum enzyme changes characteristic of muscle necrosis. Sudden unexpected death occurred if a subject apparently well was observed to have died within one hour from onset of symptoms and if the cause of death could not be attributed to some disease other than coronary heart disease. Non-sudden death from CHD occurred if the terminal episode lasted longer than one hour, if the available information implied that the cause of death was probably CHD, and if no other cause could be ascribed.

Figure 1A (from Table 1A) is a graph of the cumulative survival rates CP(I) for the 254 men and 148 women who experienced coronary heart disease. CHD includes a "mixture" of angina pectoris uncomplicated, coronary insufficiency, myocardial infarction, and coronary heart disease, each of which has a different prognosis. (See myocardial infarction and angina pectoris uncomplicated tables). Note that a diagnosis of CHD does not seem to be as serious in women as in men.

Number of exam intervals after diagnosis	Percent Surviving CHD * Men	Women
1	93.7	95.3
2	83.2	90.4
3	78.5	86.4
4	68.0	76.8
5	61.7	71.2
6	50.5	71.2
7	44.2	66.1

This is probably due to the fact that the most common manifestation of CHD in women is AP which does not appear to be a very lethal condition in women (see part 2 of this section).

Figure 1B from Table 1B includes mortality experience from the same interval as CHD diagnosis. Note that the interval I = 0 was used to denote the same interval as diagnosis of the event. P(0) thus represents the proportion of all subjects who experienced an event who survived to their next examination. More to the point Q(0) represents the proportion of all subjects who contracted CHD after an examination and did not live to the next examination. When we include this experience the percent surviving after 7 exam intervals falls from 44.2% to 33.8% for men and from 66.1% to 54.0% for women. This also shows that the first manifestation of CHD is very often lethal. 23.5% (78/332) of the men and 18.2% (33/181) of the women who had CHD died in the same interval as CHD was first diagnosed. This "zero" interval represents, on the average, one year of experience after the occurrence of CHD. The death could have actually occurred within minutes of symptoms or could have occurred two years after onset of CHD since examinations were given biennially.

* survivors of first acute episode only.

For both men and women chances of surviving are generally better at younger ages than older. The only exception to this is women 45-54 years of age who seem to fare worse than those 55-64 but since the numbers involved are small it is hard to say if this is real or peculiar to these data. At any rate the women aged 45-54 (as well as the 55-64 group) show better chances of survival throughout the 14 years than the 65-74 age group.

Number of exam intervals after event	Percent Surviving CHD by Age					
	Men			Women		
	45-54	55-64	65-74	45-54	55-64	65-74
0	84.5	74.6	68.6	84.4	89.7	70.2
1	79.8	70.5	60.8	81.3	86.2	64.9
2	71.1	62.9	49.7	77.7	83.6	56.8
3	65.7	59.6	44.8	77.7	79.1	52.1

Also note from the above table that survival in women with CHD is better in all age groups than the survival in men. This substantiates the observation that a diagnosis of CHD is more serious in men than in women and is not due solely to a difference in their age distribution.

We find that relative survival also seems better in younger men (Figure 1C). This finding is in contrast with other studies, which report that younger men have lower relative survival rates than older men suggesting that the younger men do worse in comparison with the rest of their age group than do the older men.

Figure 1A

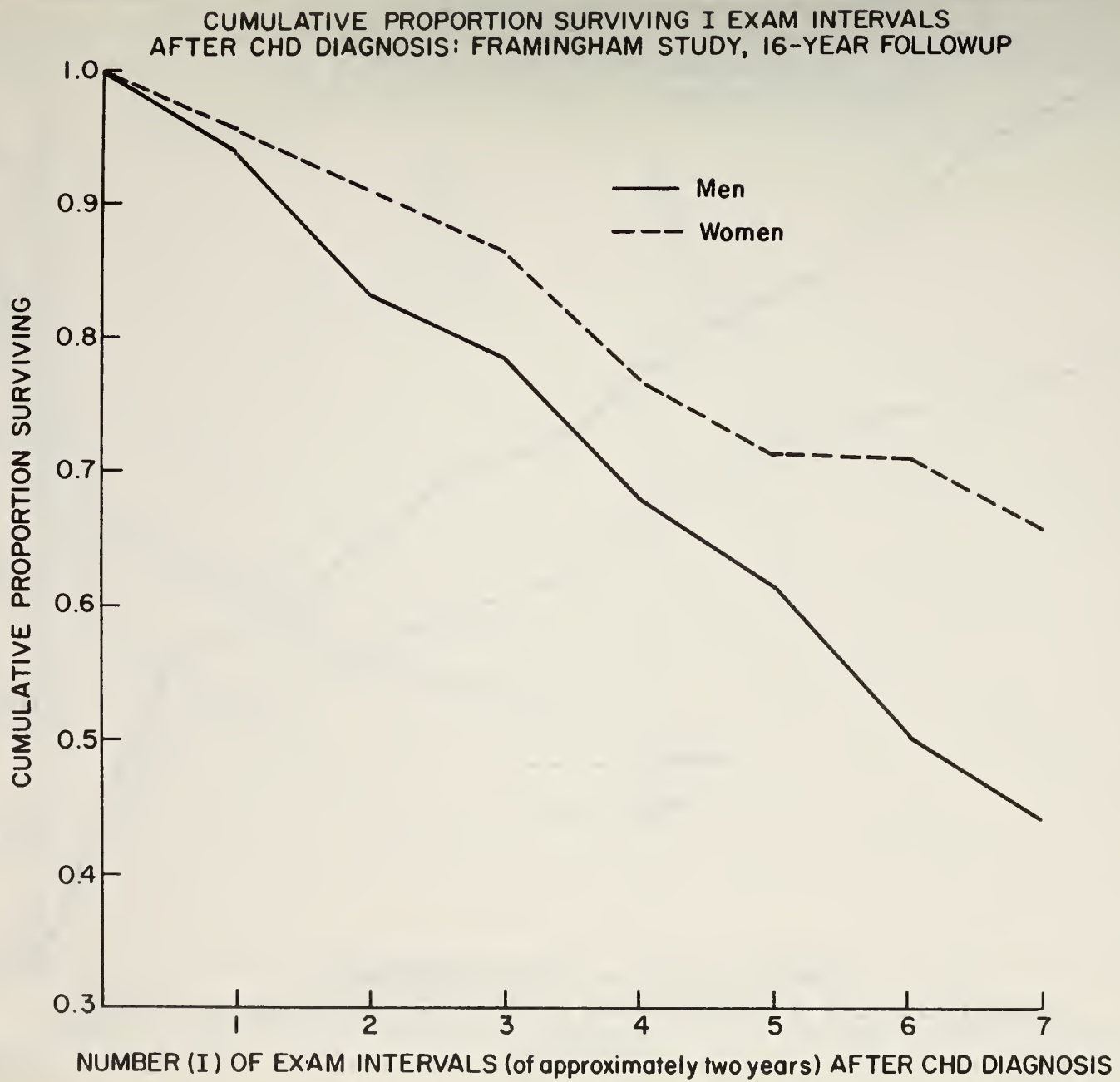

CUMULATIVE PROPORTION SURVIVING I EXAM INTERVALS
AFTER CHD DIAGNOSIS: FRAMINGHAM STUDY, 16-YEAR FOLLOWUP
Men
Women
CUMULATIVE PROPORTION SURVIVING
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
1
2
3
4
5
6
7
NUMBER (I) OF EXAM INTERVALS (of approximately two years) AFTER CHD DIAGNOSIS

Figure 1B

CUMULATIVE PROPORTION SURVIVING I EXAM INTERVALS AFTER CHD EVENT: FRAMINGHAM STUDY, 16-YEAR FOLLOWUP

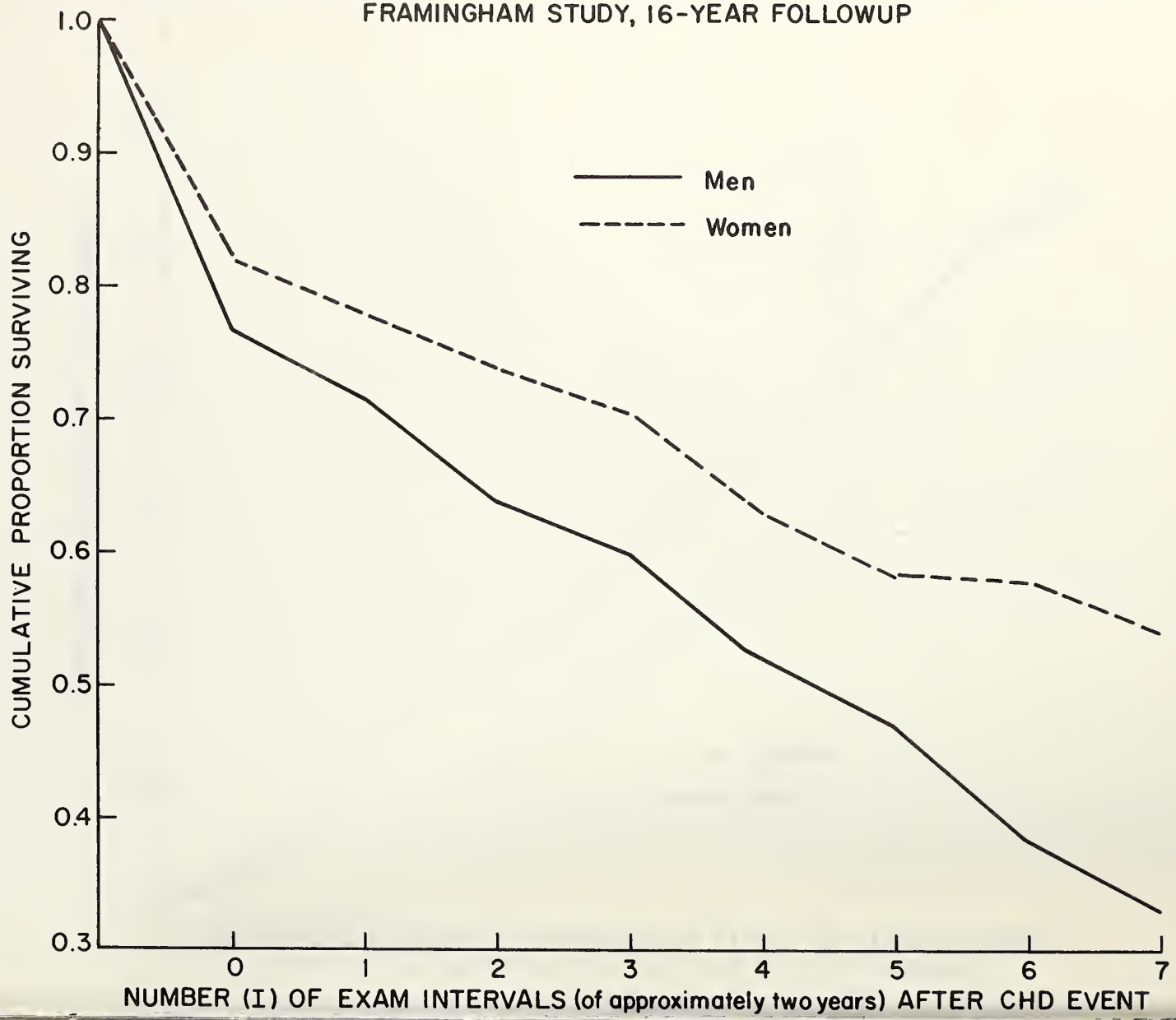
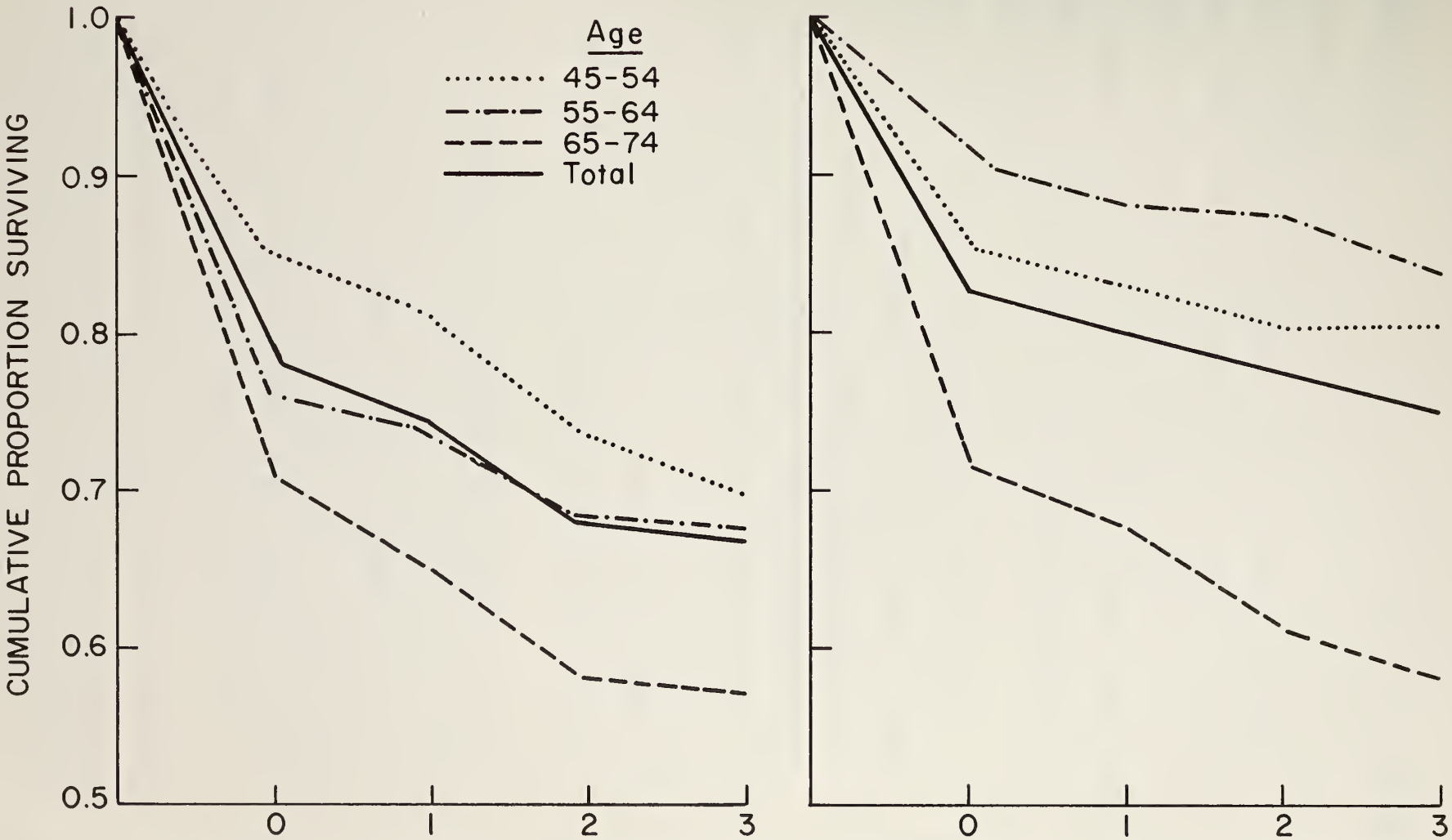


Figure 1C

CUMULATIVE RELATIVE SURVIVAL RATES BY AGE AND SEX FOR SUBJECTS WITH CHD: FRAMINGHAM STUDY, 16-YEAR FOLLOWUP



NUMBER (I) OF EXAM INTERVALS (approximately two years) AFTER CHD EVENT
(INTERVAL 0 INCLUDES DEATHS WHICH OCCURRED IN THE SAME EXAM INTERVAL AS EVENT)

Coronary Attack (CA)

Coronary attack (CA) was defined as the development of coronary heart disease (CHD) other than angina pectoris in persons free from previous evidence of the disease. Thus a coronary attack was diagnosed if a subject developed a myocardial infarction (MI), coronary insufficiency (CI), sudden or non-sudden CHD death. (See section on Coronary Heart Disease for definitions).

Table 2A includes subjects who experienced a first coronary attack and survived to the examination after attack. This is rather an artificial way of looking at the data since the CHD deaths are eliminated here by definition. Thus the A table only includes subjects who experienced a myocardial infarction or coronary insufficiency and survived to the examination after the event. The conclusions to be drawn from the A table are essentially the same as for myocardial infarction. (See the MI section for a discussion of the results on the A table).

Figure 2A (from Table 2B) is a graph of the cumulative survival rates CP(I) for 284 men and 95 women who had a coronary attack. This table includes all cases of CHD deaths, coronary insufficiency and myocardial infarction. This table shows that a first coronary attack is very often lethal. More than one-third of the subjects (35.6% of the men and 43.2% of the women) died in the same interval as their first coronary attack.

Number of exam intervals after event	Percent Surviving CA	
	Men	Women
0	64.4	56.8
1	59.5	53.7
2	50.5	49.6
3	45.0	45.9
4	39.5	36.7

Two exam intervals (approximately four years) after an attack one-half of this cohort died. There does not seem to be any difference in survival between the sexes.

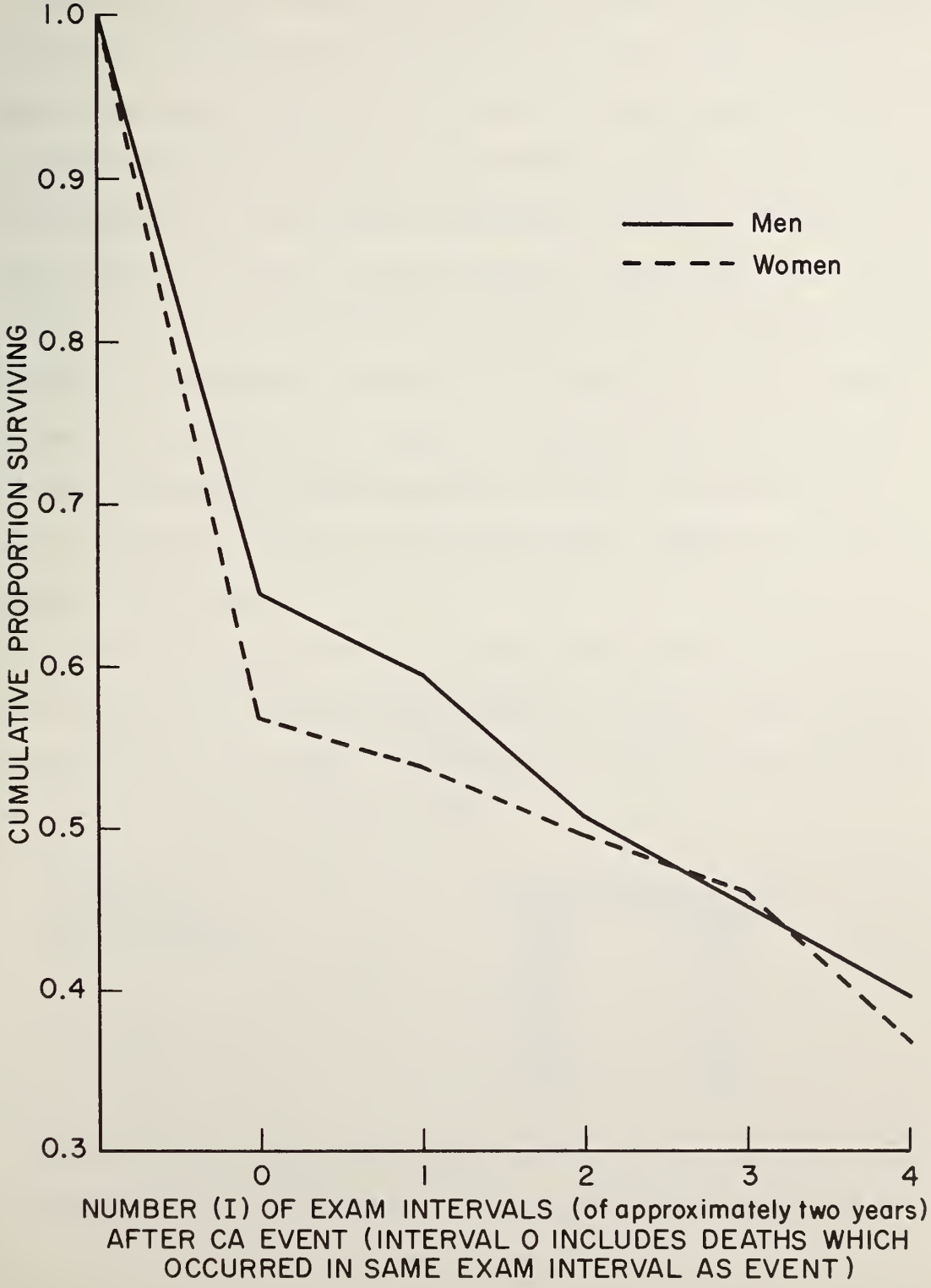
The cumulative relative survival rates CR(I) also show the heavy mortality associated with a coronary attack.

Number of exam intervals after event	Cumulative Relative Survival Rate--CA	
	Men	Women
0	.650	.573
1	.619	.555
2	.544	.522
3	.503	.496
4	.461	.410

After three exam intervals survival is only half of that expected in both sexes. After four exam intervals (approximately eight years) the expected mortality rate in men is 14.4%, the observed mortality 60.5%; in women the expected mortality rate is 10.4%, the observed 63.3%. There is greater than four times more mortality in those subjects who experienced a CA than is expected in the general population free of CA.

Figure 2A

CUMULATIVE PROPORTION SURVIVING I EXAM INTERVALS AFTER CA EVENT: FRAMINGHAM STUDY, 16-YEAR FOLLOWUP



Angina Pectoris Uncomplicated (APU)

Angina pectoris uncomplicated is the occurrence of definite angina pectoris in an exam interval without coronary heart disease death, definite myocardial infarction, or definite coronary insufficiency occurring before or in the same exam interval. Definite angina pectoris was diagnosed if two physicians interviewing the subject agreed that the distress he suffered of brief recurrent chest discomfort of up to 15 minutes duration, precipitated by exertion or emotion and relieved by rest or nitroglycerine, was due to this condition. This diagnosis was based on evaluation of a subjective manifestation; no post-exercise ECG abnormality or ECG abnormality at rest was required. It was necessary for a person to appear for clinic examination for this diagnosis to be made.

Figure 3A (from Table 3A) is a graph of the cumulative survival rates CP(I) for the 96 men and 104 women who developed angina pectoris uncomplicated. APU presents a very serious condition in men; it does not appear as lethal in women, however.

Number of exam intervals after diagnosis	Percent Surviving APU	
	Men	Women
1	95.0	95.2
2	89.1	90.7
3	83.7	87.9
4	73.0	80.6
5	65.4	78.1
6	42.3	78.1

For the first three exam intervals (approximately six years) after a diagnosis of APU, mortality in men and women looks similar--about 5%

have died after one interval, about 10% after two intervals, and about 15% after three. Soon after this mortality slows down in women, but not in men. Six exam intervals after diagnosis 22% of the women and 58% of the men died.

Mortality in women with APU does not greatly exceed that expected in women who do not have APU at the reference exam. The relative survival rate for women after six exam intervals (from Table 3A) is .892; which indicates that APU does not pose a major threat to survival in women.

The picture is quite different for men. The relative survival rate of .557 after six exam intervals indicates that the 12-year survival rate in men with APU is about one-half that expected. For men, at least, APU has a prognosis comparable to that of persons surviving the acute period of a myocardial infarction.

Number of exam intervals after diagnosis	Percent Surviving APU,MI-Men			
	Ages Combined		Ages 55-64	
	MI*	APU	MI*	APU
1	91.8	95.0	93.8	96.4
2	77.1	89.1	82.1	87.8
3	65.8	83.7	76.4	80.3
4	59.6	43.0	69.6	73.3
5	51.5	65.4	63.3	64.1

Of course, the numbers are small and the standard errors are large, especially in the last intervals, but the seriousness of angina pectoris has been noted by others. Richards et.al. (28) completed a study of 456 cases (348 men and 108 women) with angina pectoris who were followed for a minimum of 25 years. The average age of onset

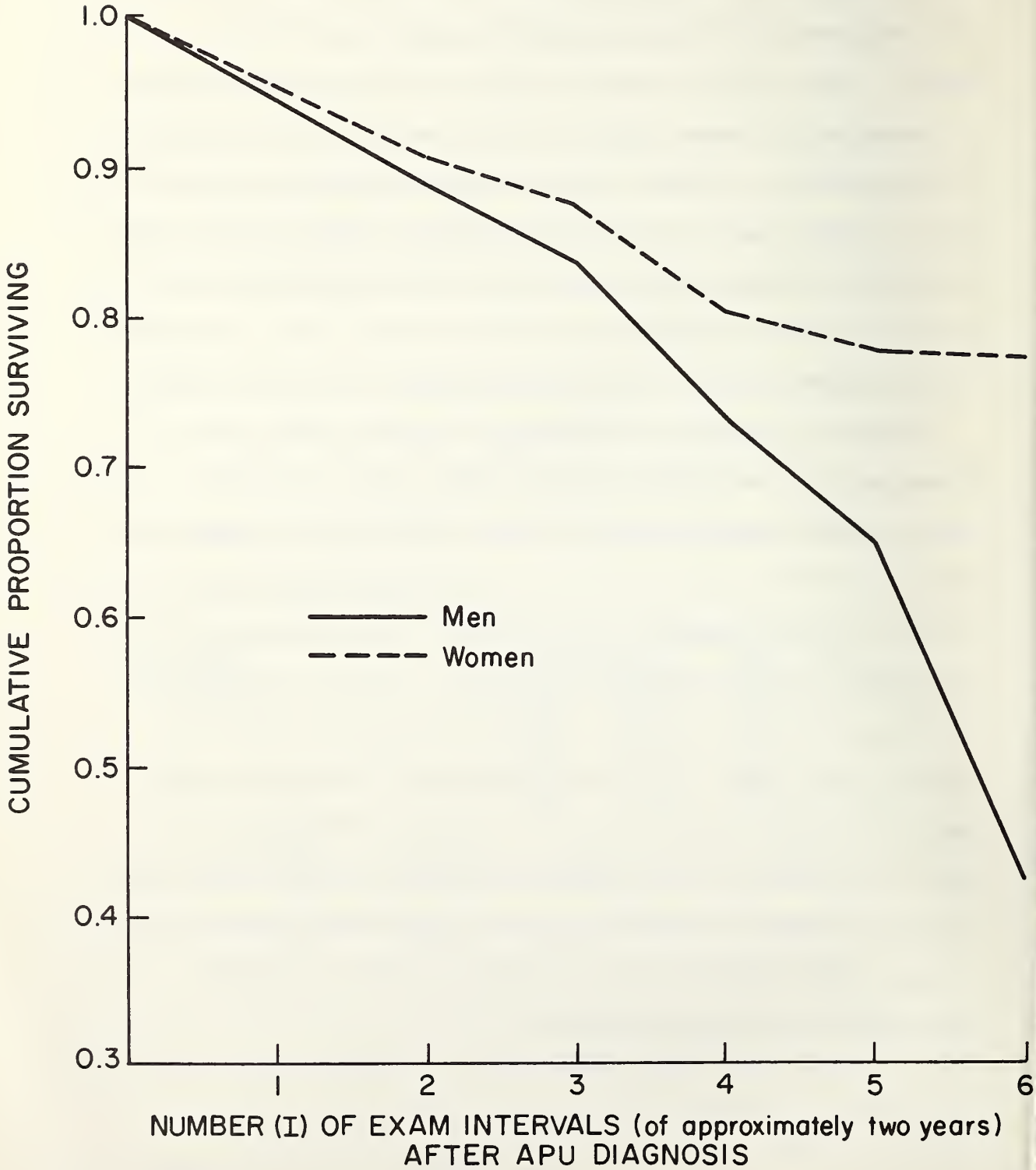
* survivors of first acute episode only.

for males was 56.6 and for females 57 years. The five and a half year survival rate was 64.3% in males and 72.6% in females; the ten and a half year survival rate was 41.4% for males and 44.3% for females. These rates are lower than what we observed, but we looked at "uncomplicated" angina which, of course, weeds out the more serious complications. Richards' study also reports greater mortality among men than among women throughout followup. They also found that the relative survival rate in young (36-55) and old (56-80) subjects was about the same indicating that angina pectoris "seems to impose the same excess mortality load on young patients as it does on old."

Block et. al. reports on 6882 cases of angina pectoris. The average age of onset was 58.5 years for males and 60.1 years for females. The five-year survival rate was 58.4% (55.9% for males and 68.8% for females); the ten-year survival rate was 37.1% (34.2% for males and 49.0% for females). Those patients with normal electrocardiograms had a better prognosis--five-year survival of 73.1% and ten-year survival rate of 50.0%. The general population adjusted for age and sex showed a five-year survival rate of 86.9% and a ten-year rate of 70.4%. Block's study also shows that although the survival rate is highest in the youngest age group and drops consistently with age, the relative survival rates are about equal in the different age groups. Our data are too scanty to allow us to make any hypotheses about the effect of age.

Figure 3A

CUMULATIVE PROPORTION SURVIVING I EXAM INTERVALS AFTER APU DIAGNOSIS: FRAMINGHAM STUDY: 16-YEAR FOLLOWUP



Myocardial Infarction (MI)

The following were the criteria used for the diagnosis of definite myocardial infarction.

(1) Recent or acute myocardial infarction was designated when S-T segment elevation in the electrocardiographic (ECG) tracing was seen associated with later inversion of T-waves and the occurrence of loss of initial QRS potentials (i.e., development of "pathologic" Q-waves of 0.04 second duration or greater, followed by serial changes of evolution if available.)

(2) An old or remote MI was considered to be present when the ECG showed a pathologic Q-wave of 0.04 second or greater, or loss of initial QRS potential (R-wave) in those leads in which this would not be expected to occur. Also an old MI was indicated when changes from a previous tracing showed a loss of R-wave potential previously present and not otherwise explained. More weight was given to this finding if a T-wave abnormality was also associated.

(3) The development of unequivocal change characteristic of myocardial infarction on routine biennial ECG examination in the absence of recognized symptoms (as reported to the examining physician by the subject) was called "silent" MI or clinically unrecognized MI.

(4) Beginning at Exam 4, a hospital report for a subject showing a rise in the serum glutamic oxalacetic transaminase to a level at least 60 units along with a history of prolonged ischemic chest

pain was accepted as evidence of myocardial infarction.

(5) An autopsy report for a subject showing an acute, new or recent infarction of the myocardium was accepted as evidence of myocardial infarction.

Note: A diagnosis of MI does not include sudden and non-sudden CHD deaths if they do not meet the above criteria.

Myocardial infarction although less common in women than in men seems nearly as serious in women, as seen in Figure 4A (from Table 4A). These calculations are based on 34 cases of MI in women and 158 cases in men.

Number of exam intervals after diagnosis	Percent Surviving MI*	
	Men	Women
1	91.8	94.1
2	77.1	81.8
3	65.8	71.6

After three exam intervals (six years) more than 28% of the women have died; whereas about 34% of the men died after the same amount of time. Figure 4B (from Table 4B) which includes subjects who died in the same interval in which they experienced an MI also indicates the seriousness of this disease in women. 30% of the women who suffered an MI died within the same exam interval. About half this percentage of men, 16% died in the corresponding interval. Other studies report a higher mortality rate for men in the first year after infarction. Pell et.al. report that 37% of the men who suffer a first myocardial infarction die within a year. Zukel et.al. report that about 22% of

* survivors of first acute episode only.

those with myocardial infarction, coronary occlusion, or coronary thrombosis die within one year. These differences may be explained by differences in definitions of disease and age distribution of the cohort.

It could be that the comparison of mortality between men and women is biased by the difference in age distribution, i.e., women with MI tend to be older than men with MI. Compare the survival rates in the largest age group for women (55-64) with those rates for men.

Number of exam intervals after event	Percent Surviving MI Age 55-64	
	Men	Women
0	86.2	77.8
1	80.9	66.7
2	70.7	66.7

The above data, with age held constant, suggest that MI may be more serious for women than for men. The cumulative relative survival rate (CR) which "adjusts" for age also suggests that MI may be a greater threat to women than to men of the same age.

Number of exam intervals after event	Cumulative Relative Survival Rate--MI	
	Men	Women
0	.851	.715
1	.806	.688
2	.702	.609
3	.621	.547

The relative survival rates (R) for each interval suggest that about four exam intervals (nine years if mortality experience from the same exam as diagnosis is included) after the event, the survival tends to return to expected. (See Figure 4C).

Number of exam intervals after event	Relative Survival Rate--MI
0	.851
1	.946
2	.869
3	.885
4	.951
5	.911
6	.990
7	.965

Cochran et.al. found that there is about three times more risk in men who have suffered an MI than the standard insurance risk for ten years or more after the MI. This is similar to our Framingham statistics. After ten years there is almost three times more mortality in men with MI than is expected (56.7% observed versus 19.8% expected). In women there is 77.5% mortality after five exam intervals as opposed to 12% expected, or about six times more mortality than is expected. Cochran's study also found that the degree of risk in comparison to standard is greater at younger ages than older. Our data are too scanty and do not support or refute any such conclusions.

Figure 4A

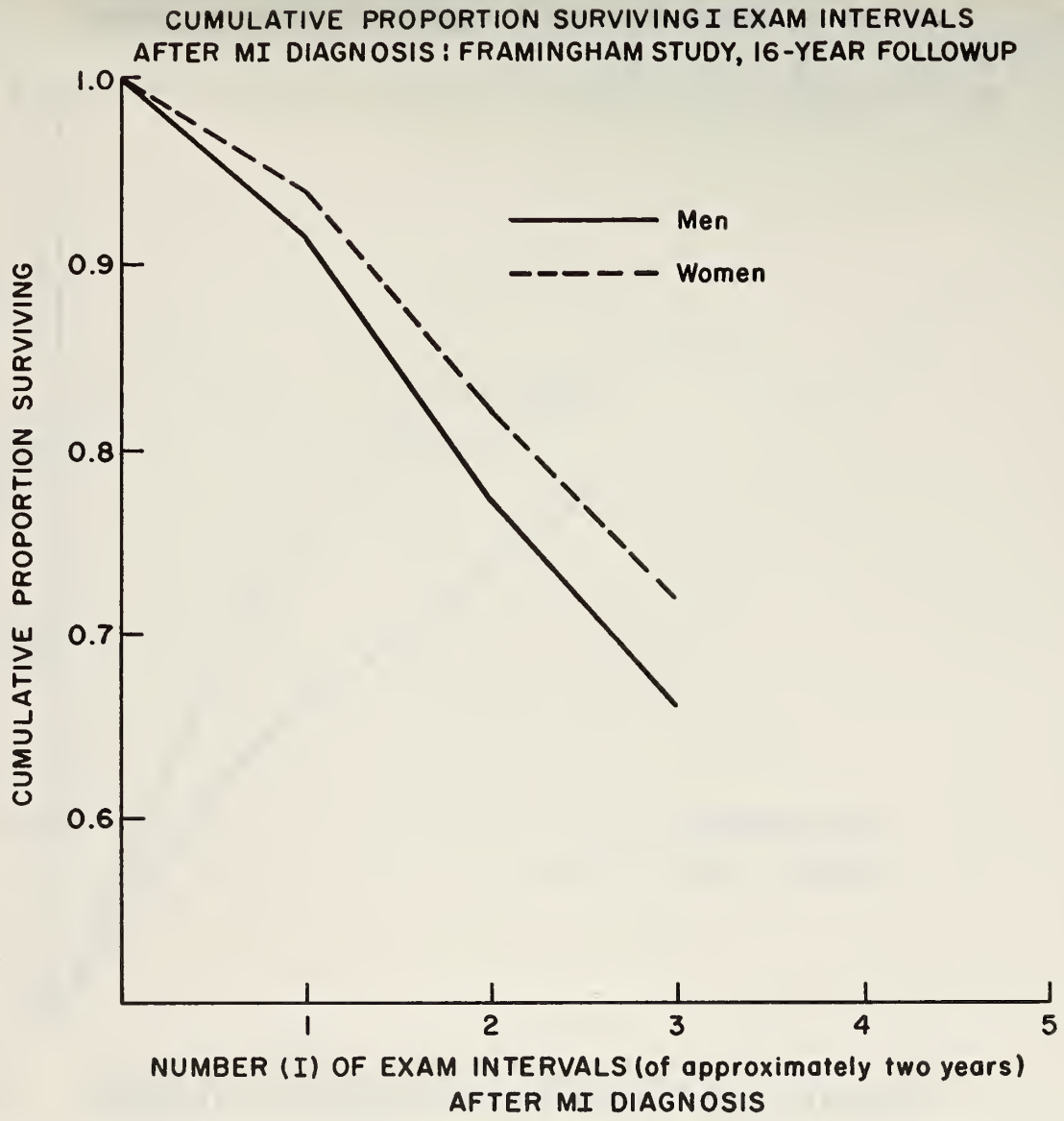
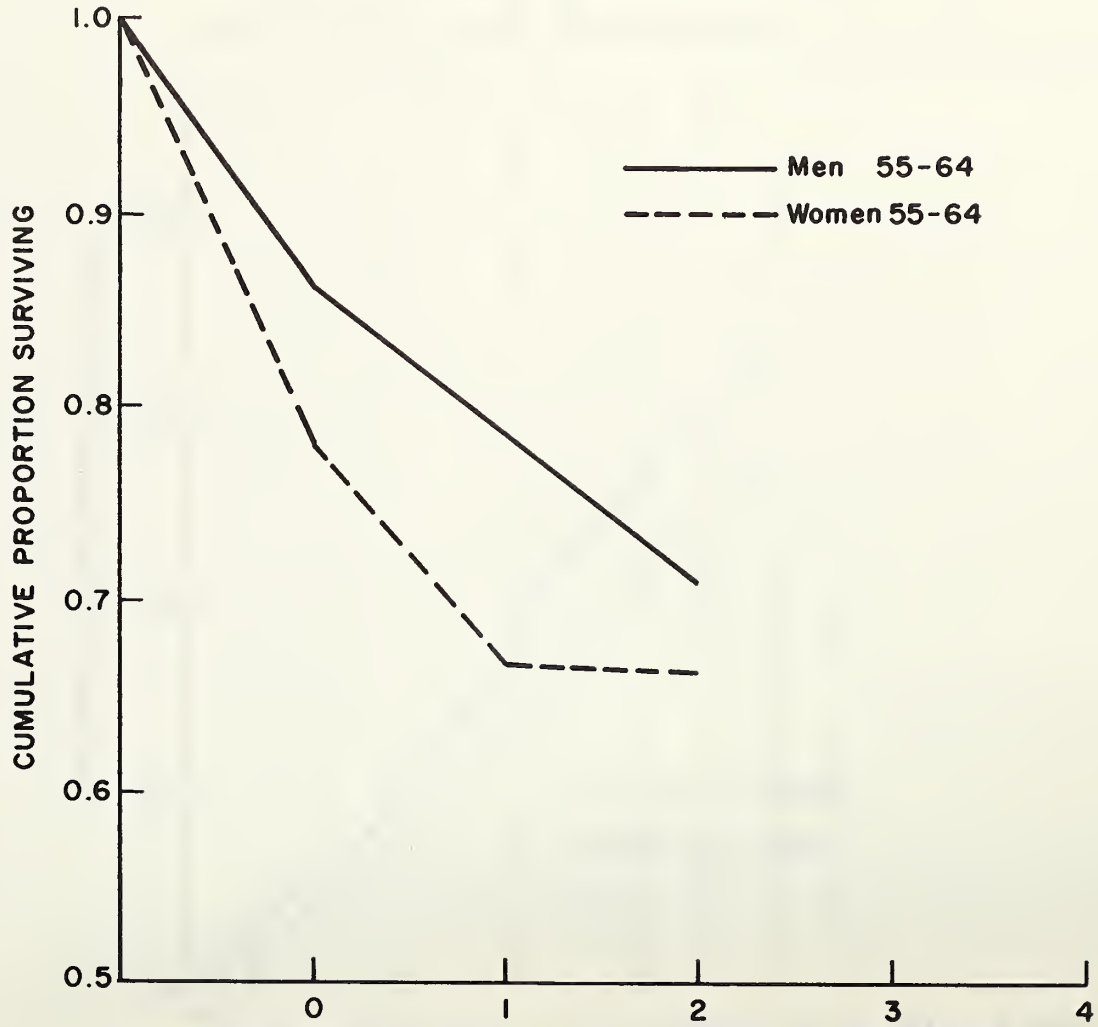

CUMULATIVE PROPORTION SURVIVING I EXAM INTERVALS
AFTER MI DIAGNOSIS: FRAMINGHAM STUDY, 16-YEAR FOLLOWUP
CUMULATIVE PROPORTION SURVIVING
1.0
0.9
0.8
0.7
0.6
Men
Women
1
2
3
4
5
NUMBER (I) OF EXAM INTERVALS (of approximately two years)
AFTER MI DIAGNOSIS

Figure 4B

CUMULATIVE PROPORTION SURVIVING I EXAM INTERVALS AFTER MI EVENT: FRAMINGHAM STUDY, 16-YEAR FOLLOWUP



NUMBER (I) OF EXAM INTERVALS (of approximately two years) AFTER MI EVENT (INTERVAL 0 INCLUDES DEATHS WHICH OCCURRED IN THE SAME EXAM INTERVAL AS EVENT)

Figure 4C

RELATIVE SURVIVAL RATE FOR MEN I EXAM INTERVALS AFTER MI EVENT

Congestive Heart Failure (CHF)

A diagnosis of definite congestive heart failure, required two major or one major and two minor criteria; the criteria existing concurrently. The minor criteria when used, were not attributable to some condition other than CHF.

Major Criteria

1) Paroxysmal nocturnal dyspnea.
2) Distended neck veins (not counting the supine position).
3) Rales in presence of unexplained dyspnea.
4) Cardiomegaly and pulmonary hilar congestion by X-ray in absence of any left to right shunt, or increasing heart size.
5) Acute pulmonary edema described in hospital record.
6) Ventricular gallop.
7) Increased venous pressure (greater than 16 cm H_2O from right atrium.
8) Circulation time (greater than 24 seconds, arm to tongue).
9) Hepato-jugular reflux.
10) Autopsy shows pulmonary edema, visceral congestion, cardiomegaly.

Minor Criteria

1) Ankle edema.
2) Night cough.
3) Dyspnea on ordinary exertion
4) Hepatomegaly.
5) Pleural effusion.
6) Decrease vital capacity by one-third from maximum recorded.
7) Tachycardia (120 beats per minute or more).

Arbitrary Major or Minor Criteria

1) Weight loss (ten pounds or more in five days) combined with improvement in respiratory symptoms in five days while on therapy for CHF.

Figure 5A (from Table 5A) is a graph of the cumulative survival rates CP(I) for the 58 men and 43 women who developed congestive heart failure. A diagnosis of CHF is very serious in both men and women.

Number of exam intervals after diagnosis	Percent Surviving CHF*	
	Men	Women
1	69.0	79.1
2	48.5	65.9
3	36.9	46.1
4	22.7	35.9

When mortality experience from the same interval as diagnosis is included the outlook becomes even more discouraging (Figure 5B).

Number of exam intervals after event	Percent Surviving CHF	
	Men	Women
0	79.5	86.0
1	54.8	68.0
2	38.5	56.7
3	29.3	39.7
4	18.1	30.9

Note that in the above table about 20% of the men and 14% of the women die in the same interval as CHF is diagnosed. This may be compared with the mortality from MI (16% for men and 29% for women) in the corresponding interval.

Even if subjects with prior or co-existing CHD are eliminated the survival does not improve. (27 of the 58 men with CHF and 16 of the women with CHF also had CHD).

* survivors of first acute episode only.

Number of exam intervals after diagnosis	Percent Surviving CHF*			
	Men		Women	
	Total	Without CHD	Total	Without CHD
1	69.0	71.0	79.1	74.1
2	48.5	52.3	65.9	65.8
3	36.9	33.3	46.1	50.6
4	22.7	20.0	35.9	36.2

Figure 5C is a graph of the relative survival rates (R). The steep slope shows that there is much more mortality than expected in a group free of CHF but similar in age. If the initial experience is combined with experience in the next four exam intervals, only 18.1% of the men survived; the expected survival rate was 84.3%. Only 30.9% of the women survived a similar period as opposed to 91.2% expected.

* survivors of first acute episode only.

Figure 5A

CUMULATIVE PROPORTION
SURVIVING I EXAM INTERVALS AFTER CHF DIAGNOSIS
FRAMINGHAM STUDY, 16-YEAR FOLLOWUP

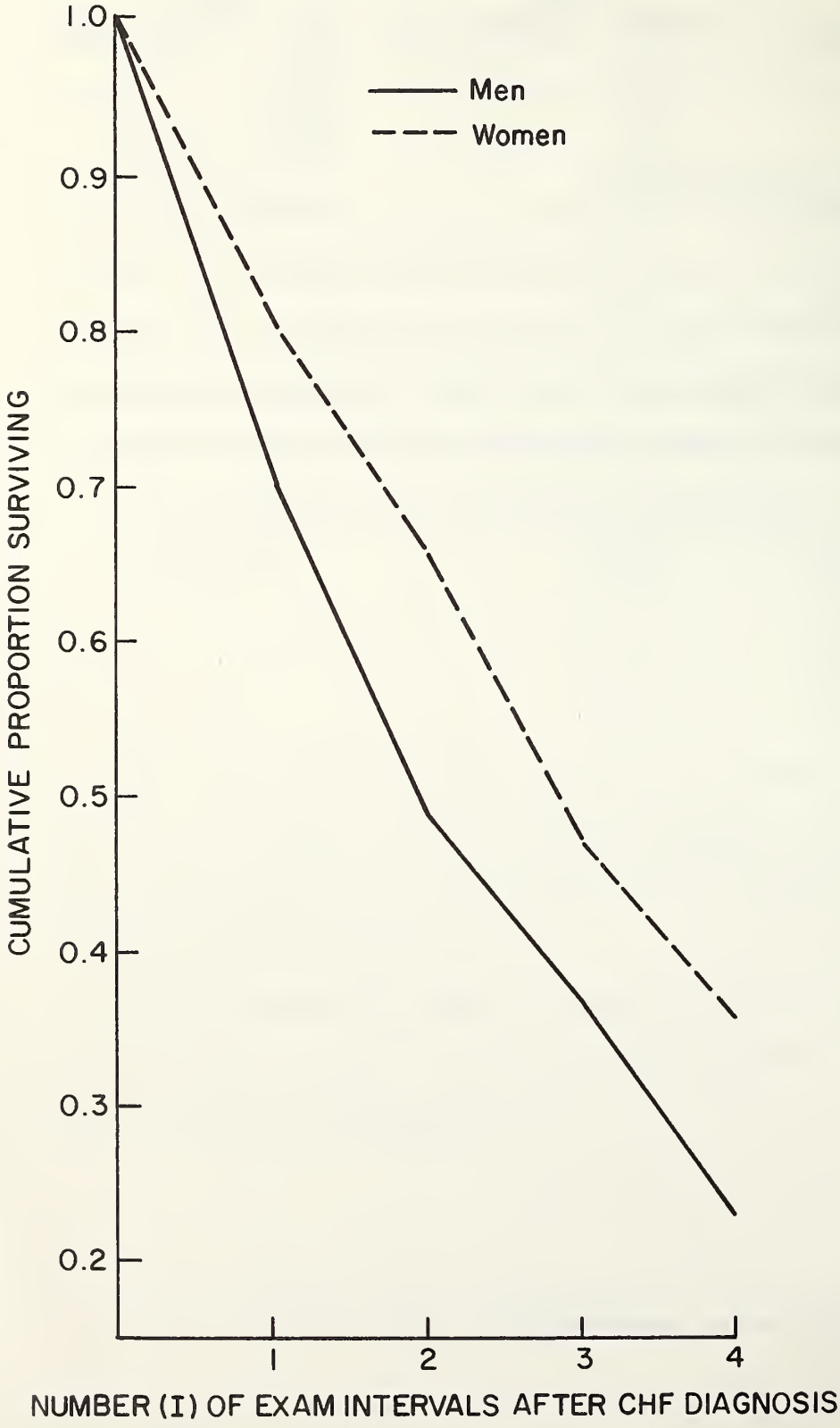


Figure 5B

CUMULATIVE PROPORTION SURVIVING I EXAM INTERVALS AFTER CHF EVENT: FRAMINGHAM STUDY, 16 YEAR FOLLOWUP

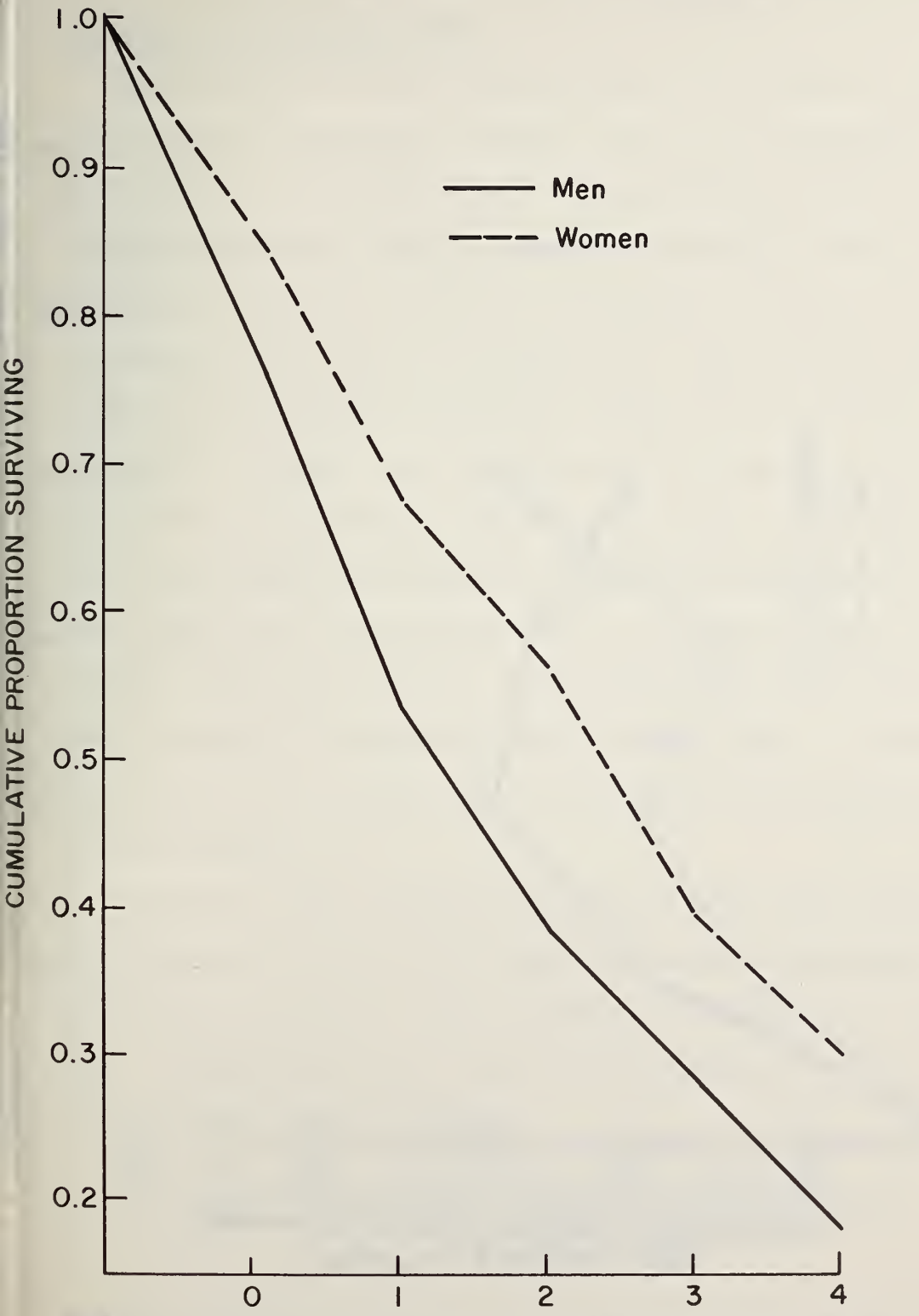
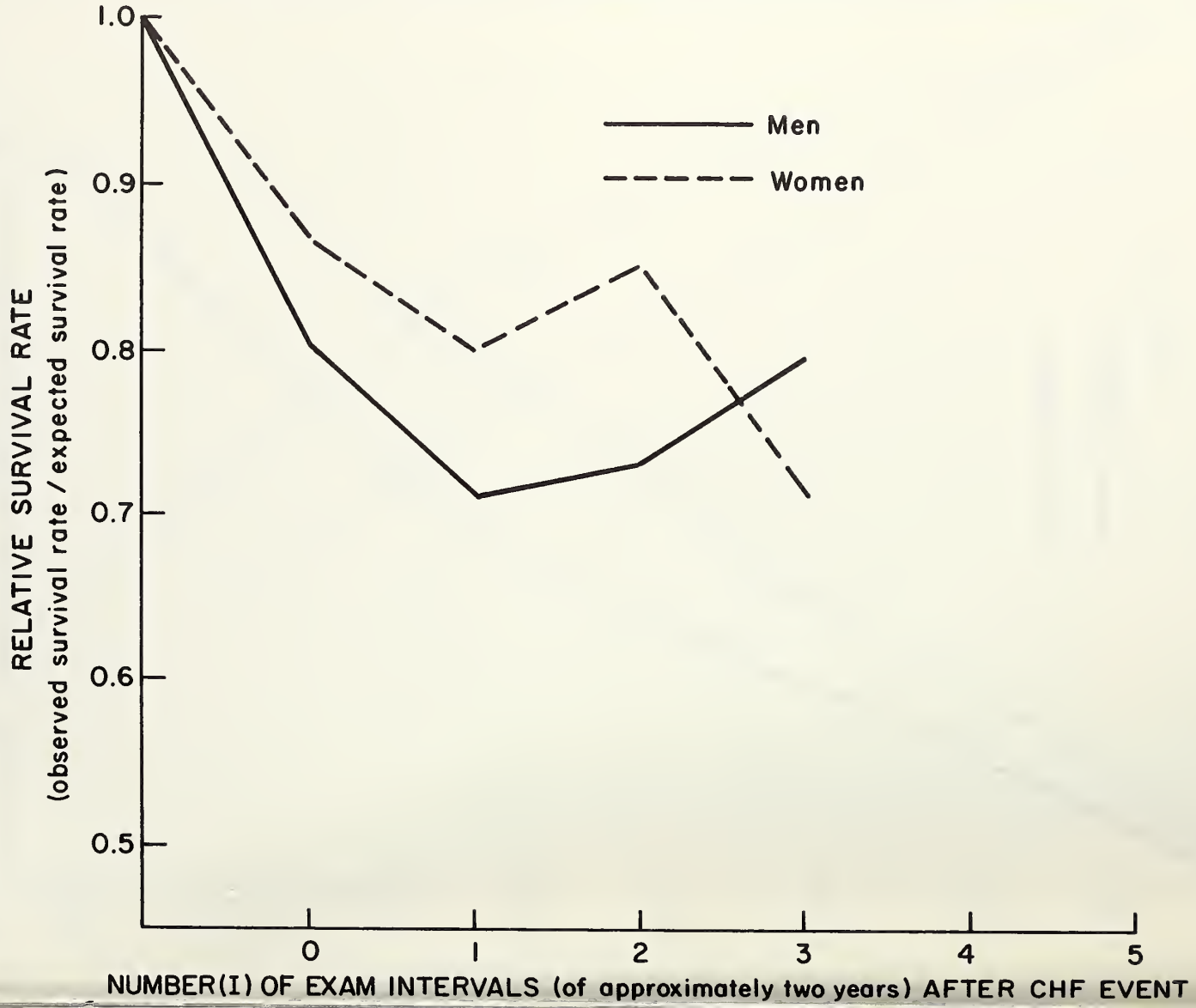


Figure 5C

RELATIVE SURVIVAL RATE I EXAM INTERVALS
AFTER CHF EVENT: FRAMINGHAM STUDY, 16-YEAR FOLLOWUP



Cerebrovascular Accident (CVA)

The diagnosis of overt vascular disease of the brain was based on the occurrence of apoplexy. Minimal criteria for nonhemorrhagic apoplexy consisted of the sudden onset of a localizing neurologic deficit (such as hemiparesis, aphasia, homonymous hemianopia); for hemorrhagic apoplexy, a change in the state of consciousness, headache, and signs of meningeal irritation in association with a bloody spinal fluid under increased pressure whether with other localizing deficits. A diagnosis of embolus to the brain was made if a source for embolus (i.e., atrial fibrillation, rheumatic heart disease with mitral stenosis, recent myocardial infarction, bacterial endocarditis) was present, the clinical course consistent (i.e., rapid onset and clearing, slightly bloody spinal fluid, a more localized deficit), or the occurrence of associated peripheral emboli elsewhere noted. A consultant neurologist and the clinical staff of the Study review hospital and clinic protocols.

Thrombotic brain infarction was defined as the sudden onset of a localizing brain deficit (e.g., aphasia, homonymous hemianopia, a central type of facial weakness, hemiparesis) documented by a physician, lasting longer than 24 hours, in the absence of:

(1) known source of embolism,
(2) intracranial hemorrhage (intracerebral subarachnoid),
(3) known hypercoagulable states (e.g., erythemia),
(4) other disease processes causing focal brain deficits (brain tumor, subdural hematoma, hypoglycemia).

Figure 6A (from Table 6A) shows the poor prognosis of subjects (44 men and 53 women) who have suffered CVA. Robinson et.al. state "general pessimism by many in the medical profession toward patients with this disease has retarded interest in any systematic study of its natural course or therapy to improve the status of patients so afflicted."

Number of exam intervals after diagnosis	Percent Surviving CVA*	
	Men	Women
1	81.8	86.8
2	67.2	82.1
3	63.0	64.5
4	47.3	60.2

If mortality experience from the same interval as diagnosis is included, it is shown that more than 30% of the men and about 20% of the women succumbed in the same interval as first diagnosis of CVA. Figure 6B (from Table 6B) shows this.

Number of exam intervals after event	Percent Surviving CVA	
	Men	Women
0	66.7	80.3
1	54.5	69.7
2	44.8	65.9
3	42.0	51.8
4	31.5	48.3

* survivors of first acute episode only.

Figure 6A

CUMULATIVE PROPORTION SURVIVING I EXAM INTERVALS AFTER CVA DIAGNOSIS: FRAMINGHAM STUDY, 16-YEAR FOLLOWUP

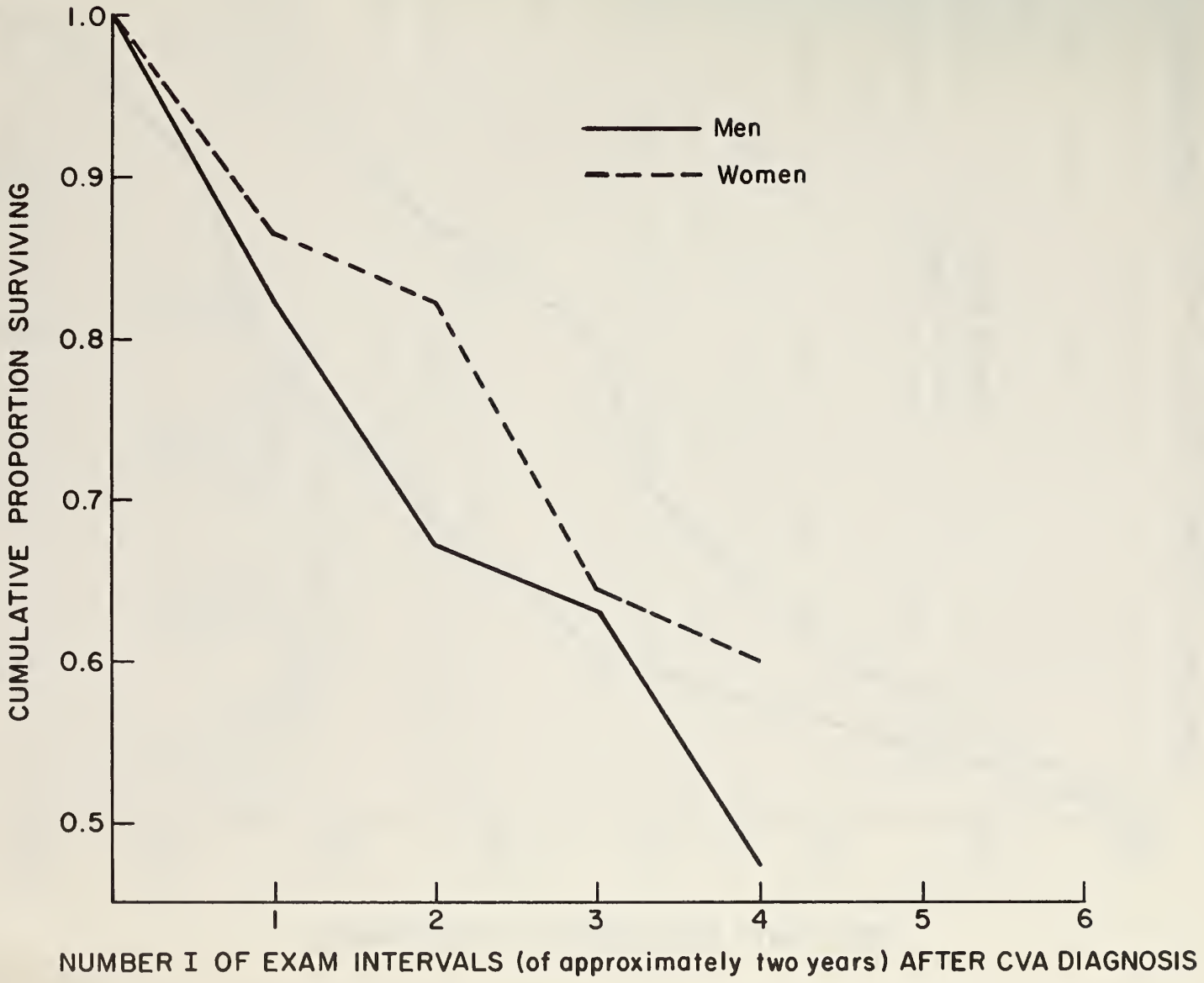
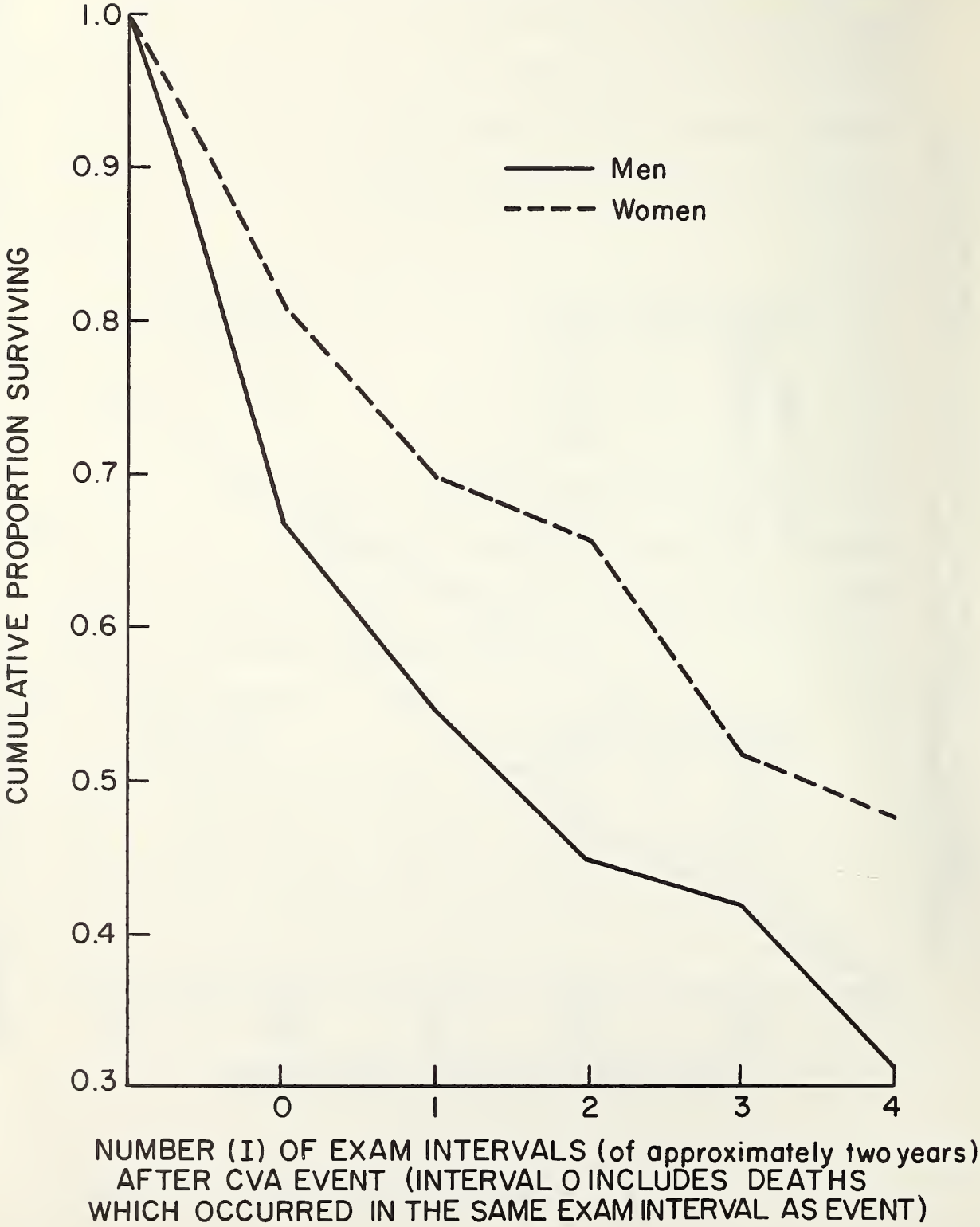


Figure 6B

CUMULATIVE PROPORTION
SURVIVING I EXAM INTERVALS AFTER CVA EVENT



Brain Infarction (BI)

For the definition of brain infarction refer to the previous section on CVA. These subjects are a subset of those who had CVA.

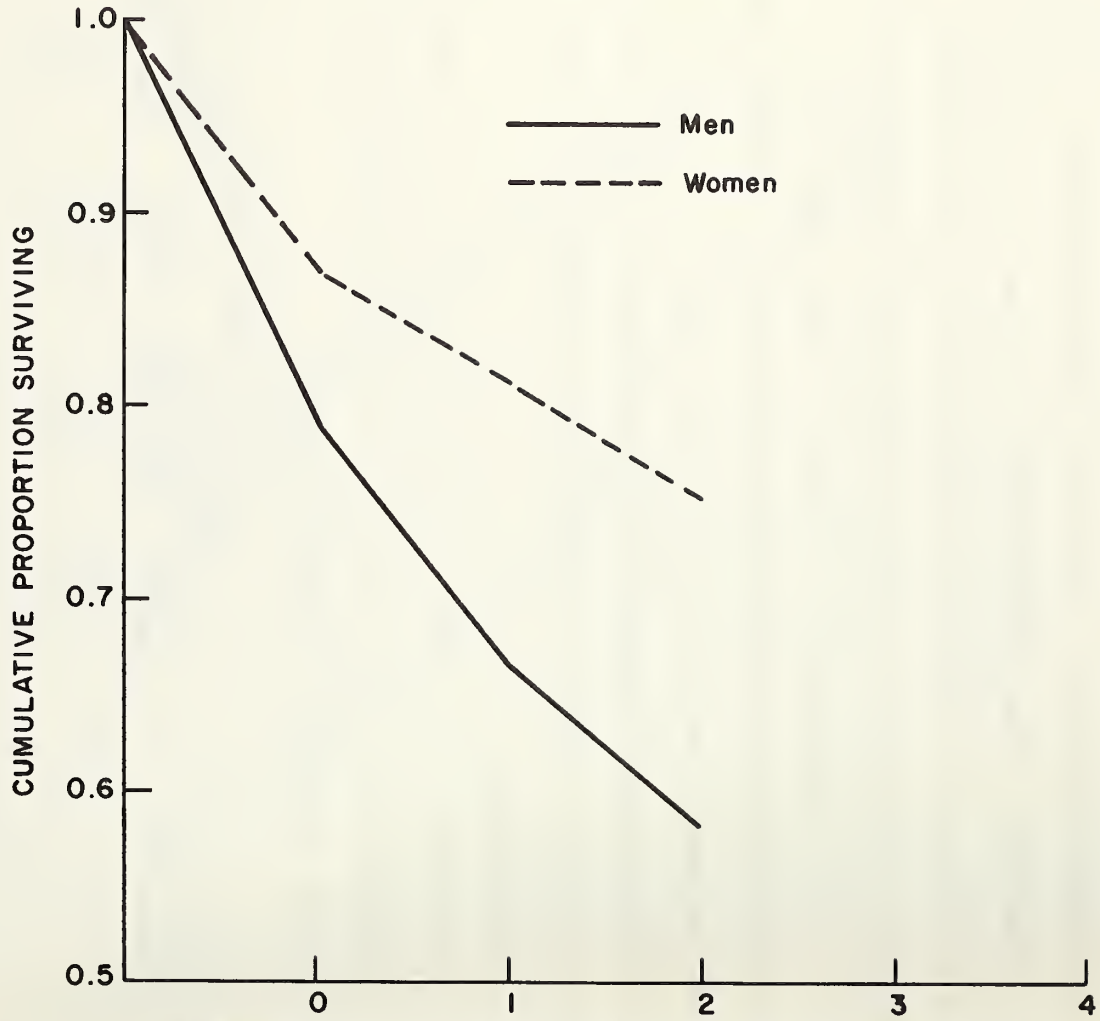
There were 71 subjects, 33 men and 38 women who incurred a first brain infarction. Figure 7A (from Table 7B) shows the survival curve. 21.2% of the men and 13.2% of the women died in the same interval as diagnosis. The numbers are small but there is not a significant difference in the survival pattern between the sexes. Conant et.al. found that there was a similar death pattern after the initial episode in the two sexes. Howard et.al. found that about 20% of 46 patients who suffered cerebral thrombosis between the ages of 30 and 70 died within one year. They also found that early mortality was strongly associated with age.

In our cohort if we eliminate those subjects who had pre-existing or co-existing CHD or CHF, the picture is better (about one-third of the subjects did have one of these conditions).

Number of exam intervals after event	Percent Surviving BI			
	Men		Women	
	Total	Without CHD or CHF	Total	Without CHD or CHF
0	78.8	95.2	86.8	95.8
1	66.7	83.3	81.6	91.0
2	58.3	74.1	75.5	78.9

Figure 7A

CUMULATIVE PROPORTION SURVIVING I EXAM INTERVALS AFTER BI EVENT



NUMBER (I) OF EXAM INTERVALS (of approximately two years) AFTER BI EVENT (INTERVAL 0 INCLUDES DEATHS WHICH OCCURRED IN THE SAME EXAM INTERVAL AS EVENT)

Intermittent Claudication (IC)

Intermittent claudication was diagnosed if the subject experienced pain in the lower limbs when walking a variable distance (30-300 yards) and if the pain appeared sooner when walking quickly or when walking uphill, and was then relieved within a few minutes by resting.

Figure 8A (from Table 8A) is a graph of the survival rates CP(I) for the 69 men and 38 women who developed intermittent claudication. This condition although less common in women appears to be associated with about the same mortality in both sexes.

Number of exam intervals after diagnosis	Percent Surviving IC	
	Men	Women
1	94.2	97.4
2	85.8	90.4
3	79.2	85.1
4	66.5	65.5
5	53.2	57.3

The mortality seen in subjects with this disease is surprisingly high. Ten years after diagnosis more than 40% of the afflicted have died. The relative survival rate also reflects the seriousness of IC. After ten years, the expected mortality for men was 20.5%; 34.6% of the subjects died; 21.9% of the women died as opposed to 10.1% expected. The relative survival rate after ten years was .822 for men, .869 for women. There does not seem to be much information in the literature concerning the prognosis of patients with IC. The above results suggest that IC is a symptom that deserves concern.

If, however, we eliminate from the cohort of those with IC,

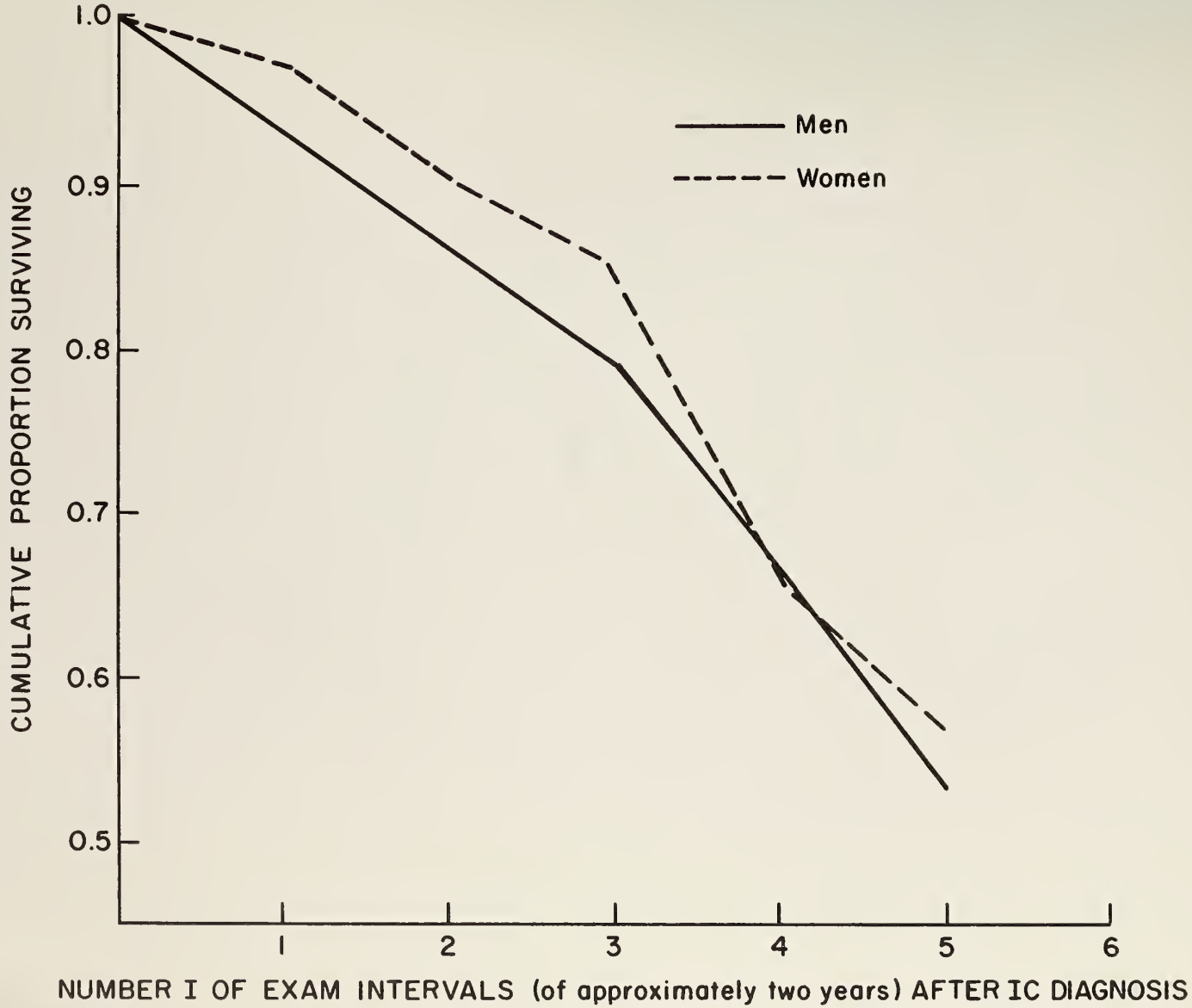
subjects with pre-existing or co-existing (existing at time of IC diagnosis) CHD, CVA, or CHF the outlook is much brighter. There are 36 men and 25 women diagnosed with IC who did not have any of these other conditions.

Number of exam intervals after diagnosis	Percent Surviving IC			
	Total		Without CHD,CVA,CHF	
	Men	Women	Men	Women
1	94.2	97.4	97.2	100.0
2	85.8	90.4	94.0	94.7
3	79.2	85.1	89.5	94.7

These survival rates are what is expected in the general population. After eight years the survival rates are the same in those with IC (excluding the other conditions) as in those without IC. These results suggest that IC appears serious because it frequently exists with other cardiovascular diseases; however, when IC appears alone the subsequent survival experience seems quite good.

Figure 8A

CUMULATIVE PROPORTION SURVIVING I EXAM INTERVALS AFTER IC DIAGNOSIS: FRAMINGHAM STUDY: 16-YEAR FOLLOWUP



LIFE TABLES

LIFE TABLES

Notes:

If the standard error of the cumulative proportion surviving (SECP) was greater than .13 the data are not presented for the interval.

Note that the category "ages combined" often includes a greater number of subjects than the sum of the individual age groups. The reason for this is that an age group often did not include enough subjects to be presented in a separate life table. For example, age groups 28-34 and 75-84 were never presented since the number of subjects was too small.

TABLE 1A. LIFE TABLE FOR CORONARY HEART DISEASE FOR MEN: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

Age at Diagnosis	I	L	D	W	Q	P	CP	SEP	SECP	R	CR	SR	SCR
35-44	1	18	0	0	0.000	1.000	1.000	0.000	0.000	1.005	1.005	0.000	0.000
	2	18	1	0	0.056	0.944	0.944	0.054	0.054	0.949	0.954	0.054	0.055
	3	17	0	2	0.000	1.000	0.944	0.000	0.054	1.005	0.958	0.000	0.055
	4	15	4	3	0.267	0.733	0.693	0.114	0.115	0.738	0.709	0.115	0.118
	5	8	0	2	0.000	1.000	0.693	0.000	0.115	1.011	0.720	0.000	0.119
	6	6	1	2	---	---	---	---	---	---	---	---	---
	7	3	0	3	---	---	---	---	---	---	---	---	---
45-54	1	71	4	12	0.056	0.944	0.944	0.027	0.027	0.957	0.957	0.028	0.028
	2	55	6	9	0.109	0.891	0.841	0.042	0.047	0.906	0.868	0.043	0.048
	3	40	3	10	0.075	0.925	0.778	0.042	0.056	0.949	0.825	0.043	0.059
	4	27	4	5	0.148	0.852	0.662	0.068	0.071	0.876	0.723	0.070	0.078
	5	18	3	8	0.167	0.833	0.552	0.088	0.083	0.860	0.623	0.091	0.094
	6	7	0	4	0.000	1.000	0.552	0.000	0.083	1.035	0.642	0.000	0.097
	7	3	0	3	0.000	1.000	0.552	0.000	0.083	1.024	0.665	0.000	0.100
55-64	1	129	7	20	0.054	0.946	0.946	0.020	0.020	0.975	0.975	0.021	0.021
	2	102	11	16	0.108	0.892	0.844	0.031	0.034	0.924	0.902	0.032	0.036
	3	75	4	16	0.053	0.947	0.799	0.026	0.039	0.987	0.891	0.027	0.043
	4	55	5	15	0.091	0.909	0.726	0.039	0.047	0.960	0.856	0.041	0.055
	5	35	2	14	0.057	0.943	0.685	0.039	0.053	0.996	0.857	0.041	0.066
	6	19	5	4	0.263	0.737	0.504	0.101	0.079	0.787	0.679	0.108	0.107
	7	10	2	8	0.200	0.800	0.404	0.126	0.090	0.879	0.596	0.139	0.133
65-74	1	35	4	9	0.114	0.886	0.886	0.054	0.054	0.939	0.939	0.057	0.057
	2	22	4	8	0.182	0.818	0.725	0.082	0.085	0.890	0.840	0.089	0.099
	3	10	1	2	0.100	0.900	0.652	0.095	0.103	0.985	0.832	0.104	0.131
	4	7	1	2	0.143	0.857	0.559	0.132	0.123	0.984	0.823	0.152	0.182
	5	4	1	2	---	---	---	---	---	---	---	---	---
	6	1	0	1	---	---	---	---	---	---	---	---	---
	7	-	-	-	---	---	---	---	---	---	---	---	---
All Ages	1	254	16	41	0.063	0.937	0.937	0.015	0.015	0.963	0.963	0.016	0.016
	2	197	22	33	0.112	0.888	0.832	0.022	0.025	0.918	0.884	0.023	0.027
	3	142	8	30	0.056	0.944	0.785	0.019	0.029	0.979	0.862	0.020	0.031
	4	104	14	25	0.135	0.865	0.680	0.033	0.036	0.906	0.781	0.035	0.041
	5	65	6	26	0.092	0.908	0.617	0.036	0.041	0.956	0.746	0.038	0.049
	6	33	6	11	0.182	0.818	0.505	0.067	0.053	0.858	0.640	0.070	0.067
	7	16	2	14	0.125	0.875	0.442	0.083	0.063	0.935	0.596	0.088	0.084

TABLE 1A. LIFE TABLE FOR CORONARY HEART DISEASE FOR WOMEN: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

Age at Diagnosis	I	L	D	W	Q	P	CP	SEP	SECP	R	CR	SR	SCR
45-54	1	27	1	3	0.037	0.963	0.963	0.036	0.036	0.972	0.972	0.037	0.037
	2	23	1	2	0.043	0.957	0.921	0.043	0.054	0.970	0.944	0.043	0.055
	3	20	0	3	0.000	1.000	0.921	0.000	0.054	1.012	0.954	0.000	0.056
	4	17	2	1	0.118	0.882	0.813	0.078	0.086	0.897	0.854	0.079	0.091
	5	14	1	4	0.071	0.929	0.755	0.069	0.098	0.946	0.808	0.070	0.105
	6	9	0	2	0.000	1.000	0.755	0.000	0.098	1.026	0.831	0.000	0.108
	7	7	1	6	0.143	0.857	0.647	0.132	0.130	0.888	0.740	0.137	0.149
55-64	1	78	3	8	0.038	0.962	0.962	0.022	0.022	0.977	0.977	0.022	0.022
	2	67	2	10	0.030	0.970	0.933	0.021	0.029	0.991	0.968	0.021	0.030
	3	55	3	14	0.055	0.945	0.882	0.031	0.040	0.969	0.934	0.031	0.042
	4	38	5	9	0.132	0.868	0.766	0.055	0.059	0.892	0.832	0.056	0.064
	5	24	1	9	0.042	0.958	0.734	0.041	0.065	0.993	0.826	0.042	0.073
	6	14	0	7	0.000	1.000	0.734	0.000	0.065	1.045	0.853	0.000	0.075
	7	7	0	7	0.000	1.000	0.734	0.000	0.065	1.043	0.879	0.000	0.078
65-74	1	40	3	13	0.075	0.925	0.925	0.042	0.042	0.957	0.957	0.043	0.043
	2	24	3	9	0.125	0.875	0.809	0.068	0.072	0.908	0.865	0.070	0.077
	3	12	1	5	0.083	0.917	0.742	0.080	0.093	0.967	0.823	0.084	0.103
	4	6	0	4	0.000	1.000	0.742	0.000	0.093	1.072	0.874	0.000	0.109
	5	2	1	1	---	---	---	---	---	---	---	---	---
	6	-	-	-	---	---	---	---	---	---	---	---	---
	7	-	-	-	---	---	---	---	---	---	---	---	---
All Ages	1	148	7	24	0.047	0.953	0.953	0.017	0.017	0.971	0.971	0.018	0.018
	2	117	6	21	0.051	0.949	0.904	0.020	0.026	0.971	0.940	0.021	0.027
	3	90	4	23	0.044	0.956	0.864	0.022	0.031	0.979	0.915	0.022	0.033
	4	63	7	15	0.111	0.889	0.768	0.040	0.044	0.914	0.833	0.041	0.048
	5	41	3	14	0.073	0.927	0.712	0.041	0.051	0.955	0.790	0.042	0.057
	6	24	0	10	0.000	1.000	0.712	0.000	0.051	1.036	0.809	0.000	0.058
	7	14	1	13	0.071	0.929	0.661	0.069	0.068	0.965	0.773	0.072	0.080

TABLE 2A. LIFE TABLE FOR CORONARY ATTACK FOR MEN: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

Age at Diagnosis	I	L	D	W	Q	P	CP	SEP	SECP	R	CR	SR	SCR
35-44	1	15	0	0	0.000	1.000	1.000	0.000	0.000	1.005	1.005	0.000	0.000
	2	15	1	0	0.067	0.933	0.933	0.064	0.064	0.938	0.943	0.065	0.065
	3	14	1	2	0.071	0.929	0.867	0.069	0.088	0.934	0.880	0.069	0.089
45-54	1	52	3	14	0.058	0.942	0.942	0.032	0.032	0.957	0.957	0.033	0.033
	2	35	5	7	0.143	0.857	0.808	0.059	0.062	0.872	0.834	0.060	0.064
	3	23	3	6	0.130	0.870	0.702	0.070	0.078	0.891	0.746	0.072	0.083
	4	14	2	2	0.143	0.857	0.602	0.094	0.094	0.884	0.659	0.096	0.103
	5	10	2	5	0.200	0.800	0.482	0.126	0.107	0.826	0.545	0.131	0.121
	6	3	0	2	0.000	1.000	0.482	0.000	0.107	1.031	0.563	0.000	0.125
	7	1	0	1	0.000	1.000	0.482	0.000	0.107	1.026	0.589	0.000	0.131
55-64	1	89	6	12	0.067	0.933	0.933	0.027	0.027	0.963	0.963	0.027	0.027
	2	71	10	13	0.141	0.859	0.801	0.041	0.045	0.892	0.861	0.043	0.048
	3	48	3	8	0.063	0.938	0.751	0.035	0.050	0.980	0.846	0.037	0.057
	4	37	3	10	0.081	0.919	0.690	0.045	0.057	0.971	0.822	0.047	0.068
	5	24	2	12	0.083	0.917	0.633	0.056	0.065	0.975	0.806	0.060	0.083
	6	10	0	3	0.000	1.000	0.633	0.000	0.065	1.085	0.877	0.000	0.091
	7	7	1	6	0.143	0.857	0.542	0.132	0.101	0.940	0.812	0.145	0.151
65-74	1	26	4	4	0.154	0.846	0.846	0.071	0.071	0.906	0.906	0.076	0.076
	2	18	5	6	0.278	0.722	0.611	0.106	0.103	0.781	0.709	0.114	0.119
	3	7	3	1	0.429	0.571	0.349	0.187	0.129	0.628	0.449	0.206	0.165
	4	3	0	1	0.000	1.000	0.349	0.000	0.129	1.159	0.512	0.000	0.189
All Ages	1	183	14	30	0.077	0.923	0.923	0.020	0.020	0.952	0.952	0.020	0.020
	2	139	21	26	0.151	0.849	0.784	0.030	0.033	0.878	0.837	0.031	0.035
	3	92	10	17	0.109	0.891	0.699	0.032	0.039	0.925	0.773	0.034	0.043
	4	65	8	13	0.123	0.877	0.613	0.041	0.044	0.918	0.709	0.043	0.051
	5	44	5	21	0.114	0.886	0.543	0.048	0.049	0.932	0.655	0.050	0.059
	6	18	1	6	0.056	0.944	0.513	0.054	0.055	0.999	0.648	0.057	0.069
	7	11	1	10	0.091	0.909	0.466	0.087	0.067	0.971	0.618	0.093	0.088

TABLE 2A. LIFE TABLE FOR CORONARY ATTACK FOR WOMEN: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

Age at Diagnosis	I	L	D	W	Q	P	CP	SEP	SECP	R	CR	SR	SCR
45-54	1	13	0	3	0.000	1.000	1.000	0.000	0.000	1.010	1.010	0.000	0.000
	2	10	1	1	0.100	0.900	0.900	0.095	0.095	0.913	0.922	0.096	0.097
	3	8	0	2	0.000	1.000	0.900	0.000	0.095	1.011	0.930	0.000	0.098
55-64	1	23	2	2	0.087	0.913	0.913	0.059	0.059	0.930	0.930	0.060	0.060
	2	19	0	4	0.000	1.000	0.913	0.000	0.059	1.024	0.952	0.000	0.061
	3	15	2	6	0.133	0.867	0.791	0.088	0.095	0.891	0.848	0.090	0.102
65-74	1	18	1	7	0.056	0.944	0.944	0.054	0.054	0.980	0.980	0.056	0.056
	2	10	2	4	0.200	0.800	0.756	0.126	0.127	0.830	0.808	0.131	0.136
	3	4	0	2	0.000	1.000	0.756	0.000	0.127	1.049	0.852	0.000	0.143
	4	2	0	1	0.000	1.000	0.756	0.000	0.127	1.072	0.901	0.000	0.151
All Ages	1	54	3	12	0.056	0.944	0.944	0.031	0.031	0.966	0.966	0.032	0.032
	2	39	3	9	0.077	0.923	0.872	0.043	0.050	0.946	0.911	0.044	0.052
	3	27	2	10	0.074	0.926	0.807	0.050	0.064	0.950	0.864	0.052	0.068
	4	15	3	3	0.200	0.800	0.646	0.103	0.098	0.825	0.705	0.107	0.107
	5	9	2	5	0.222	0.778	0.502	0.139	0.117	0.801	0.562	0.143	0.131
	6	2	0	0	0.000	1.000	0.502	0.000	0.117	1.021	0.567	0.000	0.133

TABLE 3A. LIFE TABLE FOR ANGINA PECTORIS UNCOMPLICATED FOR MEN: FRAMINGHAM HEART STUDY, 14-YEAR FOLLOW-UP

Age at Diagnosis	I	L	D	W	Q	P	CP	SEP	SECP	R	CR	SR	SCR
45-54	1	24	2	0	0.083	0.917	0.917	0.056	0.056	0.933	0.933	0.057	0.057
	2	22	1	3	0.045	0.955	0.875	0.044	0.068	0.972	0.907	0.045	0.070
	3	18	0	4	0.000	1.000	0.875	0.000	0.068	1.031	0.936	0.000	0.072
	4	14	2	3	0.143	0.857	0.750	0.094	0.100	0.883	0.827	0.096	0.111
	5	9	1	3	0.111	0.889	0.667	0.105	0.119	0.922	0.763	0.109	0.136
	6	5	0	2	0.000	1.000	0.667	0.000	0.119	1.043	0.792	0.000	0.141
	7	3	0	3	0.000	1.000	0.667	0.000	0.119	1.021	0.818	0.000	0.146
55-64	1	55	2	8	0.036	0.964	0.964	0.025	0.025	0.999	0.999	0.026	0.026
	2	45	4	6	0.089	0.911	0.878	0.042	0.047	0.949	0.949	0.044	0.051
	3	35	3	9	0.086	0.914	0.803	0.047	0.060	0.958	0.911	0.050	0.068
	4	23	2	5	0.087	0.913	0.733	0.059	0.072	0.970	0.887	0.062	0.087
	5	16	2	5	0.125	0.875	0.641	0.083	0.087	0.928	0.827	0.088	0.113
	6	9	5	1	0.556	0.444	0.285	0.166	0.113	0.473	0.396	0.176	0.157
	7	3	1	2	0.333	0.667	0.190	0.272	0.108	0.736	0.293	0.300	0.167
65-74	1	15	1	6	0.067	0.933	0.933	0.064	0.064	0.995	0.995	0.069	0.069
	2	8	0	2	0.000	1.000	0.933	0.000	0.064	1.103	1.106	0.000	0.076
	3	6	1	1	-----	-----	-----	-----	-----	-----	-----	-----	-----
	4	4	1	1	-----	-----	-----	-----	-----	-----	-----	-----	-----
	5	2	0	1	-----	-----	-----	-----	-----	-----	-----	-----	-----
	6	1	0	1	-----	-----	-----	-----	-----	-----	-----	-----	-----
All Ages	1	100	5	14	0.050	0.950	0.950	0.022	0.022	0.982	0.982	0.023	0.023
	2	81	5	11	0.062	0.938	0.891	0.027	0.033	0.974	0.955	0.028	0.035
	3	65	4	14	0.062	0.938	0.837	0.030	0.041	0.979	0.934	0.031	0.045
	4	47	6	12	0.128	0.872	0.730	0.049	0.054	0.918	0.858	0.051	0.063
	5	29	3	9	0.103	0.897	0.654	0.057	0.064	0.952	0.822	0.060	0.080
	6	17	6	5	0.353	0.647	0.423	0.116	0.086	0.678	0.557	0.121	0.113
	7	6	1	5	0.167	0.833	0.353	0.152	0.097	0.884	0.496	0.161	0.136

TABLE 3A. LIFE TABLE FOR ANGINA PECTORIS UNCOMPLICATED FOR WOMEN: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

Age at Diagnosis	I	L	D	W	Q	P	CP	SEP	SECP	R	CR	SR	SCR
45-54	1	15	1	1	0.067	0.933	0.933	0.064	0.064	0.941	0.941	0.065	0.065
	2	13	0	1	0.000	1.000	0.933	0.000	0.064	1.014	0.955	0.000	0.066
	3	12	0	1	0.000	1.000	0.933	0.000	0.064	1.013	0.968	0.000	0.067
	4	11	1	1	0.091	0.909	0.848	0.087	0.100	0.925	0.894	0.088	0.105
	5	9	0	2	0.000	1.000	0.848	0.000	0.100	1.020	0.912	0.000	0.107
	6	7	0	2	0.000	1.000	0.848	0.000	0.100	1.027	0.939	0.000	0.110
	7	5	0	5	0.000	1.000	0.848	0.000	0.100	1.039	0.980	0.000	0.115
55-64	1	57	1	6	0.018	0.982	0.982	0.017	0.017	0.998	0.998	0.018	0.018
	2	50	2	7	0.040	0.960	0.943	0.028	0.032	0.981	0.979	0.028	0.033
	3	41	1	9	0.024	0.976	0.920	0.024	0.039	1.001	0.976	0.025	0.041
	4	31	3	7	0.097	0.903	0.831	0.053	0.060	0.929	0.905	0.055	0.065
	5	21	1	6	0.048	0.952	0.792	0.046	0.069	0.986	0.889	0.048	0.077
	6	14	0	7	0.000	1.000	0.792	0.000	0.069	1.046	0.923	0.000	0.080
	7	7	0	7	0.000	1.000	0.792	0.000	0.069	1.046	0.953	0.000	0.083
65-74	1	29	3	7	0.103	0.897	0.897	0.057	0.057	0.930	0.930	0.059	0.059
	2	19	2	8	0.105	0.895	0.802	0.070	0.081	0.934	0.864	0.073	0.087
	3	9	1	4	0.111	0.889	0.713	0.105	0.111	0.943	0.797	0.111	0.124
	4	4	0	3	0.000	1.000	0.713	0.000	0.111	1.079	0.850	0.000	0.132
	5	1	0	1	0.000	1.000	0.713	0.000	0.111	1.074	0.886	0.000	0.137
	6	-	-	-	---	---	---	---	---	---	---	---	---
	7	-	-	-	---	---	---	---	---	---	---	---	---
All Ages	1	104	5	14	0.048	0.952	0.952	0.021	0.021	0.972	0.972	0.021	0.021
	2	85	4	16	0.047	0.953	0.907	0.023	0.030	0.977	0.946	0.024	0.031
	3	65	2	15	0.031	0.969	0.879	0.021	0.035	0.996	0.935	0.022	0.037
	4	48	4	12	0.083	0.917	0.806	0.040	0.047	0.943	0.879	0.041	0.052
	5	32	1	9	0.031	0.969	0.781	0.031	0.052	1.000	0.869	0.032	0.058
	6	22	0	10	0.000	1.000	0.781	0.000	0.052	1.039	0.892	0.000	0.060
	7	12	0	12	0.000	1.000	0.781	0.000	0.052	1.043	0.924	0.000	0.062

TABLE 5A. LIFE TABLE FOR CONGESTIVE HEART FAILURE FOR MEN: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

Age at Diagnosis	I	L	D	W	Q	P	CP	SEP	SECP	R	CR	SR	SCR
55-64	1	27	9	3	0.333	0.667	0.667	0.091	0.091	0.687	0.687	0.093	0.093
	2	15	4	1	0.267	0.733	0.489	0.114	0.101	0.760	0.522	0.118	0.108
	3	10	2	0	0.200	0.800	0.391	0.126	0.102	0.836	0.437	0.132	0.114
	4	8	2	1	0.250	0.750	0.293	0.153	0.097	0.794	0.346	0.162	0.114
	5	5	0	5	0.000	1.000	0.293	0.000	0.097	1.041	0.363	0.000	0.120
	6	-	-	-	---	---	---	---	---	---	---	---	---
	7	-	-	-	---	---	---	---	---	---	---	---	---
65-74	1	15	4	0	0.267	0.733	0.733	0.114	0.114	0.788	0.788	0.123	0.123
	2	11	4	3	0.364	0.636	0.467	0.145	0.129	0.691	0.543	0.158	0.150
	3	4	1	1	---	---	---	---	---	---	---	---	---
	4	2	1	1	---	---	---	---	---	---	---	---	---
	5	-	-	-	---	---	---	---	---	---	---	---	---
	6	-	-	-	---	---	---	---	---	---	---	---	---
	7	-	-	-	---	---	---	---	---	---	---	---	---
All Ages	1	58	18	3	0.310	0.690	0.690	0.061	0.061	0.716	0.716	0.063	0.063
	2	37	11	5	0.297	0.703	0.485	0.075	0.067	0.734	0.525	0.079	0.073
	3	21	5	3	0.238	0.762	0.369	0.093	0.068	0.798	0.417	0.097	0.077
	4	13	5	2	0.385	0.615	0.227	0.135	0.065	0.653	0.267	0.143	0.077
	5	6	0	5	0.000	1.000	0.227	0.000	0.065	1.035	0.274	0.000	0.079
	6	1	0	0	0.000	1.000	0.227	0.000	0.065	1.006	0.281	0.000	0.080
	7	1	0	1	0.000	1.000	0.227	0.000	0.065	1.013	0.289	0.000	0.083

TABLE 5A. LIFE TABLE FOR CONGESTIVE HEART FAILURE FOR WOMEN: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

Age at Diagnosis	I	L	D	W	Q	P	CP	SEP	SECP	R	CR	SR	SCR
55-64	1	23	3	2	0.130	0.870	0.870	0.070	0.070	0.884	0.884	0.071	0.071
	2	18	3	3	0.167	0.833	0.725	0.088	0.096	0.851	0.752	0.090	0.100
	3	12	2	4	0.167	0.833	0.604	0.108	0.112	0.855	0.641	0.110	0.119
	4	6	2	1	---	---	---	---	---	---	---	---	---
	5	3	0	1	---	---	---	---	---	---	---	---	---
	6	2	1	0	---	---	---	---	---	---	---	---	---
	7	1	0	1	---	---	---	---	---	---	---	---	---
65-74	1	13	4	2	0.308	0.692	0.692	0.128	0.128	0.713	0.713	0.132	0.132
	2	7	1	2	---	---	---	---	---	---	---	---	---
	3	4	3	0	---	---	---	---	---	---	---	---	---
	4	1	0	0	---	---	---	---	---	---	---	---	---
	5	1	0	1	---	---	---	---	---	---	---	---	---
	6	-	-	-	---	---	---	---	---	---	---	---	---
	7	-	-	-	---	---	---	---	---	---	---	---	---
All Ages	1	43	9	4	0.209	0.791	0.791	0.062	0.062	0.806	0.806	0.063	0.063
	2	30	5	5	0.167	0.833	0.659	0.068	0.075	0.854	0.687	0.070	0.078
	3	20	6	5	0.300	0.700	0.461	0.102	0.085	0.719	0.492	0.105	0.091
	4	9	2	2	0.222	0.778	0.359	0.139	0.092	0.802	0.390	0.143	0.100
	5	5	0	3	0.000	1.000	0.359	0.000	0.092	1.037	0.401	0.000	0.103
	6	2	1	0	---	---	---	---	---	---	---	---	---
	7	1	0	1	---	---	---	---	---	---	---	---	---

TABLE 6A. LIFE TABLE FOR CEREBROVASCULAR ACCIDENT FOR MEN: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

Age at Diagnosis	I	L	D	W	Q	P	CP	SEP	SECP	R	CR	SR	SCR
55-64	1	19	4	3	0.211	0.789	0.789	0.094	0.094	0.816	0.816	0.097	0.097
	2	12	3	2	0.250	0.750	0.592	0.125	0.121	0.782	0.637	0.130	0.130
	3	7	0	2	0.000	1.000	0.592	0.000	0.121	1.044	0.666	0.000	0.136
	4	5	1	2	---	---	---	---	---	---	---	---	---
	5	2	1	1	---	---	---	---	---	---	---	---	---
	6	-	-	-	---	---	---	---	---	---	---	---	---
	7	-	-	-	---	---	---	---	---	---	---	---	---
All Ages	1	44	8	8	0.182	0.818	0.818	0.058	0.058	0.848	0.848	0.060	0.060
	2	28	5	7	0.179	0.821	0.672	0.072	0.076	0.852	0.721	0.075	0.082
	3	16	1	3	0.063	0.938	0.630	0.061	0.082	0.974	0.707	0.063	0.092
	4	12	3	3	0.250	0.750	0.473	0.125	0.100	0.783	0.552	0.131	0.117
	5	6	2	2	0.333	0.667	0.315	0.192	0.113	0.698	0.377	0.202	0.135
	6	2	0	1	0.000	1.000	0.315	0.000	0.113	1.045	0.393	0.000	0.141
	7	1	0	1	0.000	1.000	0.315	0.000	0.113	1.022	0.401	0.000	0.143

TABLE 6A. LIFE TABLE FOR CEREBROVASCULAR ACCIDENT FOR WOMEN: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

Age at Diagnosis	I	L	D	W	Q	P	CP	SEP	SECP	R	CR	SR	SCR
55-64	1	17	2	1	0.118	0.882	0.882	0.078	0.078	0.896	0.896	0.079	0.079
	2	14	2	0	0.143	0.857	0.756	0.094	0.106	0.875	0.784	0.095	0.110
	3	12	2	3	0.167	0.833	0.630	0.108	0.120	0.854	0.671	0.110	0.128
	4	7	0	4	0.000	1.000	0.630	0.000	0.120	1.028	0.692	0.000	0.132
	5	3	1	0	---	---	---	---	---	---	---	---	---
	6	2	0	0	---	---	---	---	---	---	---	---	---
	7	2	0	2	---	---	---	---	---	---	---	---	---
65-74	1	23	5	7	0.217	0.783	0.783	0.086	0.086	0.812	0.812	0.089	0.089
	2	11	0	5	0.000	1.000	0.783	0.000	0.086	1.049	0.852	0.000	0.094
	3	6	2	2	---	---	---	---	---	---	---	---	---
	4	2	1	1	---	---	---	---	---	---	---	---	---
	5	-	-	-	---	---	---	---	---	---	---	---	---
	6	-	-	-	---	---	---	---	---	---	---	---	---
	7	-	-	-	---	---	---	---	---	---	---	---	---
All Ages	1	53	7	9	0.132	0.868	0.868	0.047	0.047	0.889	0.889	0.048	0.048
	2	37	2	7	0.054	0.946	0.821	0.037	0.055	0.970	0.861	0.038	0.057
	3	28	6	7	0.214	0.786	0.645	0.078	0.077	0.805	0.687	0.079	0.082
	4	15	1	6	0.067	0.933	0.602	0.064	0.083	0.960	0.658	0.066	0.091
	5	8	1	2	0.125	0.875	0.527	0.117	0.101	0.895	0.589	0.120	0.113
	6	5	0	2	0.000	1.000	0.527	0.000	0.101	1.025	0.594	0.000	0.114
	7	3	0	3	0.000	1.000	0.527	0.000	0.101	1.034	0.612	0.000	0.117

TABLE 7A. LIFE TABLE FOR BRAIN INFARCTION FOR MEN: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

Age at Diagnosis	I	L	D	W	Q	P	CP	SEP	SECP	R	CR	SR	SCR
55-64	1	13	2	3	0.154	0.846	0.846	0.100	0.100	0.877	0.877	0.104	0.104
	2	8	2	2	-----	-----	-----	-----	-----	-----	-----	-----	-----
	3	4	0	1	-----	-----	-----	-----	-----	-----	-----	-----	-----
	4	3	1	1	-----	-----	-----	-----	-----	-----	-----	-----	-----
	5	1	0	1	-----	-----	-----	-----	-----	-----	-----	-----	-----
	6	-	-	-	-----	-----	-----	-----	-----	-----	-----	-----	-----
	7	-	-	-	-----	-----	-----	-----	-----	-----	-----	-----	-----
All Ages	1	26	4	6	0.154	0.846	0.846	0.071	0.071	0.877	0.877	0.073	0.073
	2	16	2	5	0.125	0.875	0.740	0.083	0.093	0.907	0.797	0.086	0.101
	3	9	1	2	0.111	0.889	0.658	0.105	0.114	0.930	0.746	0.110	0.129
	4	6	2	1	-----	-----	-----	-----	-----	-----	-----	-----	-----
	5	3	0	2	-----	-----	-----	-----	-----	-----	-----	-----	-----
	6	1	0	1	-----	-----	-----	-----	-----	-----	-----	-----	-----
	7	-	-	-	-----	-----	-----	-----	-----	-----	-----	-----	-----

TABLE 7A. LIFE TABLE FOR BRAIN INFARCTION FOR WOMEN: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

Age at Diagnosis	I	L	D	W	Q	P	CP	SEP	SECP	R	CR	SR	SCR
55-64	1	15	0	1	0.000	1.000	1.000	0.000	0.000	1.016	1.016	0.000	0.000
	2	14	2	0	0.143	0.857	0.857	0.094	0.094	0.875	0.888	0.095	0.097
	3	12	2	3	0.167	0.833	0.714	0.108	0.121	0.855	0.760	0.110	0.128
	4	7	0	4	0.000	1.000	0.714	0.000	0.121	1.029	0.785	0.000	0.133
	5	3	1	0	-----	-----	-----	-----	-----	-----	-----	-----	-----
	6	2	0	0	-----	-----	-----	-----	-----	-----	-----	-----	-----
	7	2	0	2	-----	-----	-----	-----	-----	-----	-----	-----	-----
65-74	1	13	2	2	0.154	0.846	0.846	0.100	0.100	0.880	0.880	0.104	0.104
	2	9	0	4	0.000	1.000	0.846	0.000	0.100	1.057	0.929	0.000	0.110
	3	5	2	2	-----	-----	-----	-----	-----	-----	-----	-----	-----
	4	1	0	1	-----	-----	-----	-----	-----	-----	-----	-----	-----
	5	-	-	-	-----	-----	-----	-----	-----	-----	-----	-----	-----
	6	-	-	-	-----	-----	-----	-----	-----	-----	-----	-----	-----
	7	-	-	-	-----	-----	-----	-----	-----	-----	-----	-----	-----
All Ages	1	33	2	4	0.061	0.939	0.939	0.042	0.042	0.963	0.963	0.043	0.043
	2	27	2	5	0.074	0.926	0.870	0.050	0.061	0.955	0.918	0.052	0.064
	3	20	4	5	0.200	0.800	0.696	0.089	0.092	0.824	0.747	0.092	0.099
	4	11	0	6	0.000	1.000	0.696	0.000	0.092	1.028	0.767	0.000	0.101
	5	5	1	0	-----	-----	-----	-----	-----	-----	-----	-----	-----
	6	4	0	2	-----	-----	-----	-----	-----	-----	-----	-----	-----
	7	2	0	2	-----	-----	-----	-----	-----	-----	-----	-----	-----

TABLE 8A. LIFE TABLE FOR INTERMITTENT CLAUDICATION FOR MEN: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

Age at Diagnosis	I	L	D	W	Q	P	CP	SEP	SECP	R	CR	SR	SCR
55-64	1	30	2	3	0.067	0.933	0.933	0.046	0.046	0.967	0.967	0.047	0.047
	2	25	2	3	0.080	0.920	0.859	0.054	0.066	0.962	0.931	0.057	0.071
	3	20	2	5	0.100	0.900	0.773	0.067	0.083	0.942	0.878	0.070	0.094
	4	13	3	2	0.231	0.769	0.594	0.117	0.110	0.803	0.705	0.122	0.131
	5	8	2	0	0.250	0.750	0.446	0.153	0.123	0.800	0.566	0.163	0.156
	6	6	1	4	0.167	0.833	0.372	0.152	0.123	0.879	0.497	0.161	0.164
	7	1	0	1	0.000	1.000	0.372	0.000	0.123	1.070	0.518	0.000	0.171
65-74	1	22	2	5	0.091	0.909	0.909	0.061	0.061	0.978	0.978	0.066	0.066
	2	15	2	6	0.133	0.867	0.788	0.088	0.096	0.941	0.930	0.095	0.113
	3	7	1	2	-----	-----	-----	-----	-----	-----	-----	-----	-----
	4	4	1	1	-----	-----	-----	-----	-----	-----	-----	-----	-----
	5	2	0	2	-----	-----	-----	-----	-----	-----	-----	-----	-----
	6	-	-	-	-----	-----	-----	-----	-----	-----	-----	-----	-----
	7	-	-	-	-----	-----	-----	-----	-----	-----	-----	-----	-----
All Ages	1	69	4	9	0.058	0.942	0.942	0.028	0.028	0.983	0.983	0.029	0.029
	2	56	5	12	0.089	0.911	0.858	0.038	0.044	0.954	0.938	0.040	0.048
	3	39	3	11	0.077	0.923	0.792	0.043	0.055	0.968	0.907	0.045	0.063
	4	25	4	6	0.160	0.840	0.665	0.073	0.074	0.883	0.801	0.077	0.089
	5	15	3	3	0.200	0.800	0.532	0.103	0.091	0.848	0.679	0.109	0.116
	6	9	1	4	0.111	0.889	0.473	0.105	0.098	0.931	0.603	0.110	0.125
	7	4	0	4	0.000	1.000	0.473	0.000	0.098	1.032	0.574	0.000	0.119

TABLE 8A. LIFE TABLE FOR INTERMITTENT CLAUDICATION FOR WOMEN: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

Age at Diagnosis	I	L	D	W	Q	P	CP	SEP	SECP	R	CR	SR	SCR
55-64	1	16	0	4	0.000	1.000	1.000	0.000	0.000	1.018	1.018	0.000	0.000
	2	12	2	2	0.167	0.833	0.833	0.108	0.108	0.852	0.865	0.110	0.112
	3	8	1	1	-----	-----	-----	-----	-----	-----	-----	-----	-----
	4	6	1	1	-----	-----	-----	-----	-----	-----	-----	-----	-----
	5	4	0	2	-----	-----	-----	-----	-----	-----	-----	-----	-----
	6	2	1	1	-----	-----	-----	-----	-----	-----	-----	-----	-----
	7	-	-	-	-----	-----	-----	-----	-----	-----	-----	-----	-----
65-74	1	14	1	3	0.071	0.929	0.929	0.069	0.069	0.966	0.966	0.072	0.072
	2	10	0	6	0.000	1.000	0.929	0.000	0.069	1.039	1.000	0.000	0.074
	3	4	0	1	0.000	1.000	0.929	0.000	0.069	1.051	1.048	0.000	0.078
	4	3	1	1	-----	-----	-----	-----	-----	-----	-----	-----	-----
	5	1	0	1	-----	-----	-----	-----	-----	-----	-----	-----	-----
	6	-	-	-	-----	-----	-----	-----	-----	-----	-----	-----	-----
	7	-	-	-	-----	-----	-----	-----	-----	-----	-----	-----	-----
All Ages	1	38	1	9	0.026	0.974	0.974	0.026	0.026	1.001	1.001	0.027	0.027
	2	28	2	9	0.071	0.929	0.904	0.049	0.053	0.952	0.948	0.050	0.056
	3	17	1	3	0.059	0.941	0.851	0.057	0.072	0.967	0.910	0.059	0.077
	4	13	3	2	0.231	0.769	0.655	0.117	0.114	0.797	0.721	0.121	0.125
	5	8	1	4	0.125	0.875	0.573	0.117	0.126	0.905	0.640	0.121	0.140
	6	3	1	1	-----	-----	-----	-----	-----	-----	-----	-----	-----
	7	1	0	1	-----	-----	-----	-----	-----	-----	-----	-----	-----

Table 1B. LIFE TABLE FOR CORONARY HEART DISEASE FOR MEN: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

Age at Diagnosis	I	L	D	W	Q	P	CP	SEP	SECP	R	CR	SR	SCR
35-44	0	22	4	0	0.182	0.818	0.818	0.082	0.082	0.819	0.819	0.082	0.082
	1	18	0	0	0.000	1.000	0.818	0.000	0.082	1.005	0.823	0.000	0.083
	2	18	1	0	0.056	0.944	0.773	0.054	0.089	0.949	0.781	0.054	0.090
	3	17	0	2	0.000	1.000	0.773	0.000	0.089	1.005	0.785	0.000	0.091
	4	15	4	3	0.267	0.733	0.567	0.114	0.110	0.738	0.581	0.115	0.113
	5	8	0	2	0.000	1.000	0.567	0.000	0.110	1.011	0.589	0.000	0.114
	6	6	1	2	0.167	0.833	0.472	0.152	0.126	0.848	0.501	0.155	0.134
	7	3	0	3	0.000	1.000	0.472	0.000	0.126	1.021	0.509	0.000	0.136
45-54	0	84	13	0	0.155	0.845	0.845	0.039	0.039	0.848	0.848	0.040	0.040
	1	71	4	12	0.056	0.944	0.798	0.027	0.044	0.957	0.812	0.028	0.045
	2	55	6	9	0.109	0.891	0.711	0.042	0.051	0.906	0.736	0.043	0.053
	3	40	3	10	0.075	0.925	0.657	0.042	0.056	0.949	0.700	0.043	0.060
	4	27	4	5	0.148	0.852	0.560	0.068	0.066	0.876	0.613	0.070	0.072
	5	18	3	8	0.167	0.833	0.467	0.088	0.074	0.860	0.527	0.091	0.083
	6	7	0	4	0.000	1.000	0.467	0.000	0.074	1.035	0.544	0.000	0.086
	7	3	0	3	0.000	1.000	0.467	0.000	0.074	1.024	0.560	0.000	0.088
55-64	0	173	44	0	0.254	0.746	0.746	0.033	0.033	0.752	0.752	0.033	0.033
	1	129	7	20	0.054	0.946	0.705	0.020	0.035	0.975	0.733	0.021	0.036
	2	102	11	16	0.108	0.892	0.629	0.031	0.038	0.924	0.678	0.032	0.041
	3	75	4	16	0.053	0.947	0.596	0.026	0.039	0.987	0.669	0.027	0.044
	4	55	5	15	0.091	0.909	0.541	0.039	0.043	0.960	0.642	0.041	0.050
	5	35	2	14	0.057	0.943	0.511	0.039	0.045	0.996	0.642	0.041	0.057
	6	19	5	4	0.263	0.737	0.376	0.101	0.061	0.787	0.506	0.108	0.083
	7	10	2	8	0.200	0.800	0.301	0.126	0.068	0.879	0.443	0.139	0.101
65-74	0	51	16	0	0.314	0.686	0.686	0.065	0.065	0.699	0.699	0.066	0.066
	1	35	4	9	0.114	0.886	0.608	0.054	0.068	0.939	0.657	0.057	0.074
	2	22	4	8	0.182	0.818	0.497	0.082	0.075	0.890	0.582	0.089	0.088
	3	10	1	2	0.100	0.900	0.448	0.095	0.082	0.985	0.575	0.104	0.106
	4	7	1	2	0.143	0.857	0.384	0.132	0.092	0.984	0.563	0.152	0.135
	5	4	1	2	0.250	0.750	0.288	0.217	0.108	0.923	0.509	0.266	0.191
	6	1	0	1	0.000	1.000	0.288	0.000	0.108	1.000	0.683	0.000	0.257
	7	-	-	-	---	---	---	---	---	---	---	---	---
All Ages	0	332	78	0	0.235	0.765	0.765	0.023	0.023	0.771	0.771	0.023	0.023
	1	254	16	41	0.063	0.937	0.717	0.015	0.025	0.963	0.743	0.016	0.026
	2	197	22	33	0.112	0.888	0.637	0.022	0.027	0.918	0.681	0.023	0.029
	3	142	8	30	0.056	0.944	0.601	0.019	0.028	0.979	0.665	0.020	0.032
	4	104	14	25	0.135	0.865	0.520	0.033	0.032	0.906	0.601	0.035	0.037
	5	65	6	26	0.092	0.908	0.472	0.036	0.034	0.956	0.572	0.038	0.042
	6	33	6	11	0.182	0.818	0.386	0.067	0.042	0.858	0.490	0.070	0.054
	7	16	2	14	0.125	0.875	0.338	0.083	0.049	0.935	0.454	0.088	0.066

TABLE 1B. LIFE TABLE FOR CORONARY HEART DISEASE FOR WOMEN: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

Age at Diagnosis	I	L	D	W	Q	P	CP	SEP	SECP	R	CR	SR	SCR
35-44	0	4	1	0	---	---	---	---	---	---	---	---	---
	1	3	0	0	---	---	---	---	---	---	---	---	---
	2	3	0	0	---	---	---	---	---	---	---	---	---
	3	3	0	1	---	---	---	---	---	---	---	---	---
	4	2	0	1	---	---	---	---	---	---	---	---	---
	5	1	0	0	---	---	---	---	---	---	---	---	---
	6	1	0	1	---	---	---	---	---	---	---	---	---
	7	-	-	-	---	---	---	---	---	---	---	---	---
45-54	0	32	5	0	0.156	0.844	0.844	0.064	0.064	0.847	0.847	0.064	0.064
	1	27	1	3	0.037	0.963	0.813	0.036	0.069	0.972	0.824	0.037	0.070
	2	23	1	2	0.043	0.957	0.777	0.043	0.074	0.970	0.799	0.043	0.077
	3	20	0	3	0.000	1.000	0.777	0.000	0.074	1.012	0.809	0.000	0.078
	4	17	2	1	0.118	0.882	0.686	0.078	0.089	0.897	0.724	0.079	0.094
	5	14	1	4	0.071	0.929	0.637	0.069	0.096	0.946	0.684	0.070	0.103
	6	9	0	2	0.000	1.000	0.637	0.000	0.096	1.026	0.704	0.000	0.106
	7	7	1	6	0.143	0.857	0.546	0.132	0.117	0.888	0.627	0.137	0.135
55-64	0	87	9	0	0.103	0.897	0.897	0.033	0.033	0.901	0.901	0.033	0.033
	1	78	3	8	0.038	0.962	0.862	0.022	0.037	0.977	0.881	0.022	0.038
	2	67	2	10	0.030	0.970	0.836	0.021	0.040	0.991	0.872	0.021	0.042
	3	55	3	14	0.055	0.945	0.791	0.031	0.046	0.969	0.841	0.031	0.049
	4	38	5	9	0.132	0.868	0.687	0.055	0.059	0.892	0.748	0.056	0.064
	5	24	1	9	0.042	0.958	0.658	0.041	0.063	0.993	0.742	0.042	0.071
	6	14	0	7	0.000	1.000	0.658	0.000	0.063	1.045	0.767	0.000	0.073
	7	7	0	7	0.000	1.000	0.658	0.000	0.063	1.043	0.789	0.000	0.075
65-74	0	57	17	0	0.298	0.702	0.702	0.061	0.061	0.709	0.709	0.061	0.061
	1	40	3	13	0.075	0.925	0.649	0.042	0.063	0.957	0.679	0.043	0.066
	2	24	3	9	0.125	0.875	0.568	0.068	0.071	0.908	0.611	0.070	0.076
	3	12	1	5	0.083	0.917	0.521	0.080	0.079	0.967	0.581	0.084	0.088
	4	6	0	4	0.000	1.000	0.521	0.000	0.079	1.072	0.617	0.000	0.094
	5	2	1	1	---	---	---	---	---	---	---	---	---
	6	-	-	-	---	---	---	---	---	---	---	---	---
	7	-	-	-	---	---	---	---	---	---	---	---	---
All Ages	0	181	33	0	0.182	0.818	0.818	0.029	0.029	0.823	0.823	0.029	0.029
	1	148	7	24	0.047	0.953	0.779	0.017	0.031	0.971	0.800	0.018	0.032
	2	117	6	21	0.051	0.949	0.739	0.020	0.033	0.971	0.773	0.021	0.035
	3	90	4	23	0.044	0.956	0.706	0.022	0.036	0.979	0.753	0.022	0.038
	4	63	7	15	0.111	0.889	0.628	0.040	0.042	0.914	0.687	0.041	0.046
	5	41	3	14	0.073	0.927	0.582	0.041	0.047	0.955	0.650	0.042	0.052
	6	24	0	10	0.000	1.000	0.582	0.000	0.047	1.036	0.664	0.000	0.053
	7	14	1	13	0.071	0.929	0.540	0.069	0.059	0.965	0.634	0.072	0.069

TABLE 2B. LIFE TABLE FOR CORONARY ATTACK FOR MEN: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

Age at Diagnosis	I	L	D	W	Q	P	CP	SEP	SECP	R	CR	SR	SCR
35-44	0	19	4	0	0.211	0.789	0.789	0.094	0.094	0.790	0.790	0.094	0.094
	1	15	0	0	0.000	1.000	0.789	0.000	0.094	1.005	0.794	0.000	0.094
	2	15	1	0	0.067	0.933	0.737	0.064	0.101	0.938	0.745	0.065	0.102
	3	14	1	2	0.071	0.929	0.684	0.069	0.107	0.934	0.695	0.069	0.108
	4	11	3	0	0.273	0.727	0.498	0.134	0.120	0.732	0.511	0.135	0.123
	5	8	0	3	0.000	1.000	0.498	0.000	0.120	1.012	0.517	0.000	0.125
45-54	0	67	15	0	0.224	0.776	0.776	0.051	0.051	0.779	0.779	0.051	0.051
	1	52	3	14	0.058	0.942	0.731	0.032	0.054	0.957	0.746	0.033	0.055
	2	35	5	7	0.143	0.857	0.627	0.059	0.063	0.872	0.650	0.060	0.066
	3	23	3	6	0.130	0.870	0.545	0.070	0.071	0.891	0.581	0.072	0.075
	4	14	2	2	0.143	0.857	0.467	0.094	0.079	0.884	0.513	0.096	0.087
	5	10	2	5	0.200	0.800	0.374	0.126	0.087	0.826	0.424	0.131	0.098
	6	3	0	2	0.000	1.000	0.374	0.000	0.087	1.031	0.438	0.000	0.101
	7	1	0	1	0.000	1.000	0.374	0.000	0.087	1.026	0.452	0.000	0.105
55-64	0	147	58	0	0.395	0.605	0.605	0.040	0.040	0.610	0.610	0.041	0.041
	1	89	6	12	0.067	0.933	0.565	0.027	0.041	0.963	0.588	0.027	0.043
	2	71	10	13	0.141	0.859	0.485	0.041	0.042	0.892	0.526	0.043	0.046
	3	48	3	8	0.063	0.938	0.455	0.035	0.043	0.980	0.516	0.037	0.049
	4	37	3	10	0.081	0.919	0.418	0.045	0.044	0.971	0.501	0.047	0.053
	5	24	2	12	0.083	0.917	0.383	0.056	0.047	0.975	0.491	0.060	0.060
	6	10	0	3	0.000	1.000	0.383	0.000	0.047	1.085	0.529	0.000	0.065
	7	7	1	6	0.143	0.857	0.328	0.132	0.065	0.940	0.493	0.145	0.097
65-74	0	48	22	0	0.458	0.542	0.542	0.072	0.072	0.552	0.552	0.073	0.073
	1	26	4	4	0.154	0.846	0.458	0.071	0.072	0.906	0.499	0.076	0.078
	2	18	5	6	0.278	0.722	0.331	0.106	0.071	0.781	0.389	0.114	0.083
	3	7	3	1	0.429	0.571	0.189	0.187	0.074	0.628	0.245	0.206	0.096
	4	3	0	1	0.000	1.000	0.189	0.000	0.074	1.159	0.280	0.000	0.110
	5	2	1	1	0.500	0.500	0.095	0.354	0.076	0.597	0.167	0.422	0.135
All Ages	0	284	101	0	0.356	0.644	0.644	0.028	0.028	0.650	0.650	0.029	0.029
	1	183	14	30	0.077	0.923	0.595	0.020	0.029	0.952	0.619	0.020	0.030
	2	139	21	26	0.151	0.849	0.505	0.030	0.031	0.878	0.544	0.031	0.033
	3	92	10	17	0.109	0.891	0.450	0.032	0.032	0.925	0.503	0.034	0.036
	4	65	8	13	0.123	0.877	0.395	0.041	0.033	0.918	0.461	0.043	0.039
	5	44	5	21	0.114	0.886	0.350	0.048	0.035	0.932	0.427	0.050	0.043
	6	18	1	6	0.056	0.944	0.331	0.054	0.038	0.999	0.422	0.057	0.049
	7	11	1	10	0.091	0.909	0.300	0.087	0.045	0.971	0.402	0.093	0.060

TABLE 2B. LIFE TABLE FOR CORONARY ATTACK FOR WOMEN: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

Age at Diagnosis	I	L	D	W	Q	P	CP	SEP	SECP	R	CR	SR	SCR
45-54	0	18	5	0	0.278	0.722	0.722	0.106	0.106	0.726	0.726	0.106	0.106
	1	13	0	3	0.000	1.000	0.722	0.000	0.106	1.010	0.734	0.000	0.107
	2	10	1	1	0.100	0.900	0.650	0.095	0.117	0.913	0.669	0.096	0.121
	3	8	0	2	0.000	1.000	0.650	0.000	0.117	1.011	0.675	0.000	0.122
55-64	0	34	11	0	0.324	0.676	0.676	0.080	0.080	0.681	0.681	0.081	0.081
	1	23	2	2	0.087	0.913	0.618	0.059	0.083	0.930	0.633	0.060	0.085
	2	19	0	4	0.000	1.000	0.618	0.000	0.083	1.024	0.648	0.000	0.087
	3	15	2	6	0.133	0.867	0.535	0.088	0.090	0.891	0.576	0.090	0.097
	4	7	2	2	0.286	0.714	0.382	0.171	0.112	0.737	0.423	0.176	0.124
	5	3	0	3	0.000	1.000	0.382	0.000	0.112	1.042	0.441	0.000	0.129
65-74	0	41	23	0	0.561	0.439	0.439	0.078	0.078	0.444	0.444	0.078	0.078
	1	18	1	7	0.056	0.944	0.415	0.054	0.077	0.980	0.436	0.056	0.081
	2	10	2	4	0.200	0.800	0.332	0.126	0.081	0.830	0.358	0.131	0.087
	3	4	0	2	0.000	1.000	0.332	0.000	0.081	1.049	0.375	0.000	0.091
	4	2	0	1	0.000	1.000	0.332	0.000	0.081	1.072	0.398	0.000	0.097
All Ages	0	95	41	0	0.432	0.568	0.568	0.051	0.051	0.573	0.573	0.051	0.051
	1	54	3	12	0.056	0.944	0.537	0.031	0.051	0.966	0.555	0.032	0.053
	2	39	3	9	0.077	0.923	0.496	0.043	0.052	0.946	0.522	0.044	0.055
	3	27	2	10	0.074	0.926	0.459	0.050	0.055	0.950	0.496	0.052	0.059
	4	15	3	3	0.200	0.800	0.367	0.103	0.064	0.825	0.410	0.107	0.072
	5	9	2	5	0.222	0.778	0.285	0.139	0.071	0.801	0.326	0.143	0.082
	6	2	0	0	0.000	1.000	0.285	0.000	0.071	1.021	0.328	0.000	0.082
	7	2	1	1	0.500	0.500	0.143	0.354	0.107	0.512	0.161	0.362	0.121

TABLE 4B. LIFE TABLE FOR MYOCARDIAL INFARCTION FOR MEN: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

Age at Diagnosis	I	L	D	W	Q	P	CP	SEP	SECP	R	CR	SR	SCR
35-44	0	12	0	0	0.000	1.000	1.000	0.000	0.000	1.002	1.002	0.000	0.000
	1	12	0	0	0.000	1.000	1.000	0.000	0.000	1.005	1.007	0.000	0.000
	2	12	1	1	0.083	0.917	0.917	0.080	0.080	0.923	0.929	0.080	0.081
	3	10	3	0	---	---	---	---	---	---	---	---	---
	4	7	0	0	---	---	---	---	---	---	---	---	---
	5	7	0	2	---	---	---	---	---	---	---	---	---
	6	5	1	1	---	---	---	---	---	---	---	---	---
	7	3	0	3	---	---	---	---	---	---	---	---	---
45-54	0	44	2	0	0.045	0.955	0.955	0.031	0.031	0.959	0.959	0.032	0.032
	1	42	4	11	0.095	0.905	0.864	0.045	0.052	0.919	0.881	0.046	0.053
	2	27	4	5	0.148	0.852	0.736	0.068	0.074	0.868	0.764	0.070	0.077
	3	18	3	5	0.167	0.833	0.613	0.088	0.089	0.853	0.655	0.090	0.095
	4	10	2	1	0.200	0.800	0.490	0.126	0.105	0.825	0.541	0.130	0.116
	5	7	2	3	0.286	0.714	0.350	0.171	0.113	0.738	0.400	0.176	0.129
	6	2	0	2	0.000	1.000	0.350	0.000	0.113	1.027	0.415	0.000	0.133
	7	-	-	-	---	---	---	---	---	---	---	---	---
55-64	0	94	13	0	0.138	0.862	0.862	0.036	0.036	0.873	0.873	0.036	0.036
	1	81	5	12	0.062	0.938	0.809	0.027	0.041	0.970	0.847	0.028	0.043
	2	64	8	13	0.125	0.875	0.707	0.041	0.049	0.907	0.771	0.043	0.053
	3	43	3	6	0.070	0.930	0.658	0.039	0.053	0.972	0.751	0.041	0.061
	4	34	3	9	0.088	0.912	0.600	0.049	0.058	0.966	0.727	0.052	0.070
	5	22	2	11	0.091	0.909	0.545	0.061	0.064	0.968	0.706	0.065	0.083
	6	9	0	2	0.000	1.000	0.545	0.000	0.064	1.084	0.764	0.000	0.090
	7	7	1	6	0.143	0.857	0.468	0.132	0.091	0.940	0.715	0.145	0.139
65-74	0	35	13	0	0.371	0.629	0.629	0.082	0.082	0.642	0.642	0.083	0.083
	1	22	3	3	0.136	0.864	0.543	0.073	0.084	0.923	0.591	0.078	0.092
	2	16	6	6	0.375	0.625	0.339	0.121	0.084	0.672	0.399	0.130	0.099
	3	4	2	0	0.500	0.500	0.170	0.250	0.095	0.552	0.222	0.276	0.124
	4	2	0	1	0.000	1.000	0.170	0.000	0.095	1.166	0.252	0.000	0.141
	5	1	1	0	---	---	---	---	---	---	---	---	---
	6	-	-	-	---	---	---	---	---	---	---	---	---
	7	-	-	-									
All Ages	0	188	30	0	0.160	0.840	0.840	0.027	0.027	0.851	0.851	0.027	0.027
	1	158	13	26	0.082	0.918	0.771	0.022	0.031	0.946	0.806	0.023	0.032
	2	119	19	25	0.160	0.840	0.648	0.034	0.037	0.869	0.702	0.035	0.040
	3	75	11	11	0.147	0.853	0.553	0.041	0.041	0.885	0.621	0.042	0.046
	4	53	5	11	0.094	0.906	0.501	0.040	0.043	0.951	0.591	0.042	0.051
	5	37	5	16	0.135	0.865	0.433	0.056	0.047	0.911	0.533	0.059	0.058
	6	16	1	5	0.063	0.938	0.406	0.061	0.051	0.990	0.518	0.064	0.065
	7	10	1	9	0.100	0.900	0.366	0.095	0.060	0.965	0.493	0.102	0.081

TABLE 4B. LIFE TABLE FOR MYOCARDIAL INFARCTION FOR WOMEN: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

Age at Diagnosis	I	L	D	W	Q	P	CP	SEP	SECP	R	CR	SR	SCR
45-54	0	12	2	0	0.167	0.833	0.833	0.108	0.108	0.838	0.838	0.108	0.108
	1	10	0	3	0.000	1.000	0.833	0.000	0.108	1.011	0.847	0.000	0.109
	2	7	1	1	---	---	---	---	---	---	---	---	---
	3	5	0	1	---	---	---	---	---	---	---	---	---
	4	4	1	0	---	---	---	---	---	---	---	---	---
	5	3	1	0	---	---	---	---	---	---	---	---	---
	6	2	0	0	---	---	---	---	---	---	---	---	---
	7	2	1	1	---	---	---	---	---	---	---	---	---
55-64	0	18	4	0	0.222	0.778	0.778	0.098	0.098	0.783	0.783	0.099	0.099
	1	14	2	2	0.143	0.857	0.667	0.094	0.111	0.874	0.684	0.095	0.114
	2	10	0	2	0.000	1.000	0.667	0.000	0.111	1.025	0.700	0.000	0.117
	3	8	2	2	---	---	---	---	---	---	---	---	---
	4	4	2	0	---	---	---	---	---	---	---	---	---
	5	2	0	2	---	---	---	---	---	---	---	---	---
	6	-	-	-	---	---	---	---	---	---	---	---	---
	7	-	-	-	---	---	---	---	---	---	---	---	---
65-74	0	15	5	0	0.333	0.667	0.667	0.122	0.122	0.677	0.677	0.124	0.124
	1	10	0	4	0.000	1.000	0.667	0.000	0.122	1.037	0.704	0.000	0.129
	2	6	2	1	---	---	---	---	---	---	---	---	---
	3	3	0	2	---	---	---	---	---	---	---	---	---
	4	1	0	0	---	---	---	---	---	---	---	---	---
	5	1	1	0	---	---	---	---	---	---	---	---	---
	6	-	-	-	---	---	---	---	---	---	---	---	---
	7	-	-	-	---	---	---	---	---	---	---	---	---
All Ages	0	48	14	0	0.292	0.708	0.708	0.066	0.066	0.715	0.715	0.066	0.066
	1	34	2	9	0.059	0.941	0.667	0.040	0.068	0.962	0.688	0.041	0.070
	2	23	3	4	0.130	0.870	0.580	0.070	0.075	0.892	0.609	0.072	0.079
	3	16	2	5	0.125	0.875	0.507	0.083	0.082	0.898	0.547	0.085	0.088
	4	9	3	0	0.333	0.667	0.338	0.157	0.096	0.687	0.371	0.162	0.106
	5	6	2	2	0.333	0.667	0.225	0.192	0.092	0.688	0.256	0.199	0.104
	6	2	0	0	0.000	1.000	0.225	0.000	0.092	1.021	0.256	0.000	0.104
	7	2	1	1	0.500	0.500	0.113	0.354	0.092	0.512	0.127	0.362	0.104

TABLE 5B. LIFE TABLE FOR CONGESTIVE HEART FAILURE FOR MEN: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

Age at Diagnosis	I	L	D	W	Q	P	CP	SEP	SECP	R	CR	SR	SCR
45-54	0	15	3	0	0.200	0.800	0.800	0.103	0.103	0.805	0.805	0.104	0.104
	1	12	4	0	0.333	0.667	0.533	0.136	0.129	0.681	0.548	0.139	0.132
	2	8	1	1	0.125	0.875	0.467	0.117	0.129	0.895	0.491	0.120	0.135
	3	6	2	2	0.333	0.667	0.311	0.192	0.124	0.688	0.337	0.199	0.135
	4	2	2	0	---	---	---	---	---	---	---	---	---
	5	-	-	-	---	---	---	---	---	---	---	---	---
	6	-	-	-	---	---	---	---	---	---	---	---	---
	7	-	-	-	---	---	---	---	---	---	---	---	---
55-64	0	32	5	0	0.156	0.844	0.844	0.064	0.064	0.854	0.854	0.065	0.065
	1	27	9	3	0.333	0.667	0.563	0.091	0.088	0.687	0.587	0.093	0.092
	2	15	4	1	0.267	0.733	0.412	0.114	0.091	0.760	0.446	0.118	0.098
	3	10	2	0	0.200	0.800	0.330	0.126	0.089	0.836	0.372	0.132	0.101
	4	8	2	1	0.250	0.750	0.247	0.153	0.084	0.794	0.295	0.162	0.100
	5	5	0	5	0.000	1.000	0.247	0.000	0.084	1.041	0.310	0.000	0.105
	6	-	-	-	---	---	---	---	---	---	---	---	---
	7	-	-	-	---	---	---	---	---	---	---	---	---
65-74	0	20	5	0	0.250	0.750	0.750	0.097	0.097	0.776	0.776	0.100	0.100
	1	15	4	0	0.267	0.733	0.550	0.114	0.111	0.788	0.612	0.123	0.124
	2	11	4	3	0.364	0.636	0.350	0.145	0.107	0.691	0.422	0.158	0.129
	3	4	1	1	0.250	0.750	0.262	0.217	0.110	0.817	0.346	0.236	0.145
	4	2	1	1	0.500	0.500	0.131	0.354	0.108	0.564	0.193	0.399	0.158
	5	-	-	-	---	---	---	---	---	---	---	---	---
	6	-	-	-	---	---	---	---	---	---	---	---	---
	7	-	-	-	---	---	---	---	---	---	---	---	---
All Ages	0	73	15	0	0.205	0.795	0.795	0.047	0.047	0.808	0.808	0.048	0.048
	1	58	18	3	0.310	0.690	0.548	0.061	0.058	0.716	0.578	0.063	0.061
	2	37	11	5	0.297	0.703	0.385	0.075	0.058	0.734	0.423	0.079	0.064
	3	21	5	3	0.238	0.762	0.293	0.093	0.057	0.798	0.335	0.097	0.065
	4	13	5	2	0.385	0.615	0.181	0.135	0.053	0.653	0.214	0.143	0.063
	5	6	0	5	---	---	---	---	---	---	---	---	---
	6	1	0	0	---	---	---	---	---	---	---	---	---
	7	1	0	1	---	---	---	---	---	---	---	---	---

TABLE 5B. LIFE TABLE FOR CONGESTIVE HEART FAILURE FOR WOMEN: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

Age at Diagnosis	I	L	D	W	Q	P	CP	SEP	SECP	R	CR	SR	SCR
65-74	0	18	5	0	0.278	0.722	0.722	0.106	0.106	0.732	0.732	0.107	0.107
	1	13	4	2	0.308	0.692	0.500	0.128	0.118	0.713	0.522	0.132	0.123
	2	7	1	2	0.143	0.857	0.429	0.132	0.121	0.892	0.465	0.138	0.131
	3	4	3	0	0.750	0.250	0.107	0.217	0.098	0.261	0.121	0.226	0.110
	4	1	0	0	0.000	1.000	0.107	0.000	0.098	1.067	0.129	0.000	0.117
	5	1	0	1	0.000	1.000	0.107	0.000	0.098	1.071	0.136	0.000	0.124
	6	-	-	-	---	---	---	---	---	---	---	---	---
	7	-	-	-	---	---	---	---	---	---	---	---	---
All Ages	0	50	7	0	0.140	0.860	0.860	0.049	0.049	0.867	0.867	0.049	0.049
	1	43	9	4	0.209	0.791	0.680	0.062	0.066	0.806	0.699	0.063	0.068
	2	30	5	5	0.167	0.833	0.567	0.068	0.072	0.854	0.595	0.070	0.076
	3	20	6	5	0.300	0.700	0.397	0.102	0.077	0.719	0.426	0.105	0.083
	4	9	2	2	0.222	0.778	0.309	0.139	0.081	0.802	0.338	0.143	0.089
	5	5	0	3	0.000	1.000	0.309	0.000	0.081	1.037	0.349	0.000	0.092
	6	2	1	0	0.500	0.500	0.154	0.354	0.116	0.515	0.178	0.364	0.134
	7	1	0	1	0.000	1.000	0.154	0.000	0.116	1.032	0.180	0.000	0.136

TABLE 6B. LIFE TABLE FOR CEREBROVASCULAR ACCIDENT FOR MEN: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

Age at Diagnosis	I	L	D	W	Q	P	CP	SEP	SECP	R	CR	SR	SCR
45-54	0	18	5	0	0.278	0.722	0.722	0.106	0.106	0.727	0.727	0.106	0.106
	1	13	0	1	0.000	1.000	0.722	0.000	0.106	1.020	0.742	0.000	0.108
	2	12	0	5	0.000	1.000	0.722	0.000	0.106	1.022	0.758	0.000	0.111
	3	7	1	1	---	---	---	---	---	---	---	---	---
	4	5	1	1	---	---	---	---	---	---	---	---	---
	5	3	0	1	---	---	---	---	---	---	---	---	---
	6	2	0	1	---	---	---	---	---	---	---	---	---
	7	1	0	1	---	---	---	---	---	---	---	---	---
55-64	0	28	9	0	0.321	0.679	0.679	0.088	0.088	0.688	0.688	0.090	0.090
	1	19	4	3	0.211	0.789	0.536	0.094	0.094	0.816	0.563	0.097	0.099
	2	12	3	2	0.250	0.750	0.402	0.125	0.097	0.782	0.439	0.130	0.106
	3	7	0	2	0.000	1.000	0.402	0.000	0.097	1.044	0.457	0.000	0.111
	4	5	1	2	0.200	0.800	0.321	0.179	0.106	0.842	0.385	0.188	0.127
	5	2	1	1	0.500	0.500	0.161	0.354	0.125	0.537	0.202	0.380	0.157
	6	-	-	-	---	---	---	---	---	---	---	---	---
	7	-	-	-	---	---	---	---	---	---	---	---	---
65-74	0	18	7	0	0.389	0.611	0.611	0.115	0.115	0.630	0.630	0.119	0.119
	1	11	4	4	0.364	0.636	0.389	0.145	0.115	0.678	0.424	0.155	0.125
	2	3	2	0	0.667	0.333	0.130	0.272	0.113	0.363	0.158	0.296	0.137
	3	1	0	0	0.000	1.000	0.130	0.000	0.113	1.110	0.180	0.000	0.156
	4	1	1	0	---	---	---	---	---	---	---	---	---
	5	-	-	-	---	---	---	---	---	---	---	---	---
	6	-	-	-	---	---	---	---	---	---	---	---	---
	7	-	-	-	---	---	---	---	---	---	---	---	---
All Ages	0	66	22	0	0.333	0.667	0.667	0.058	0.058	0.678	0.678	0.059	0.059
	1	44	8	8	0.182	0.818	0.545	0.058	0.061	0.848	0.574	0.060	0.065
	2	28	5	7	0.179	0.821	0.448	0.072	0.064	0.852	0.488	0.075	0.070
	3	16	1	3	0.063	0.938	0.420	0.061	0.066	0.974	0.481	0.063	0.075
	4	12	3	3	0.250	0.750	0.315	0.125	0.072	0.783	0.373	0.131	0.085
	5	6	2	2	0.333	0.667	0.210	0.192	0.077	0.698	0.249	0.202	0.092
	6	2	0	1	0.000	1.000	0.210	0.000	0.077	1.045	0.253	0.000	0.093
	7	1	0	1	0.000	1.000	0.210	0.000	0.077	1.022	0.256	0.000	0.094

TABLE 6B. LIFE TABLE FOR CEREBROVASCULAR ACCIDENT FOR WOMEN: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

Age at Diagnosis	I	L	D	W	Q	P	CP	SEP	SECP	R	CR	SR	SCR
45-54	0	13	3	0	0.231	0.769	0.769	0.117	0.117	0.772	0.772	0.117	0.117
	1	10	0	1	0.000	1.000	0.769	0.000	0.117	1.013	0.783	0.000	0.119
	2	9	0	2	0.000	1.000	0.769	0.000	0.117	1.015	0.793	0.000	0.120
	3	7	2	1	---	---	---	---	---	---	---	---	---
	4	4	0	1	---	---	---	---	---	---	---	---	---
	5	3	0	0	---	---	---	---	---	---	---	---	---
	6	3	0	2	---	---	---	---	---	---	---	---	---
	7	1	0	1	---	---	---	---	---	---	---	---	---
55-64	0	22	5	0	0.227	0.773	0.773	0.089	0.089	0.778	0.778	0.090	0.090
	1	17	2	1	0.118	0.882	0.682	0.078	0.099	0.896	0.698	0.079	0.102
	2	14	2	0	0.143	0.857	0.584	0.094	0.106	0.875	0.612	0.095	0.111
	3	12	2	3	0.167	0.833	0.487	0.108	0.109	0.854	0.523	0.110	0.117
	4	7	0	4	0.000	1.000	0.487	0.000	0.109	1.028	0.537	0.000	0.120
	5	3	1	0	---	---	---	---	---	---	---	---	---
	6	2	0	0	---	---	---	---	---	---	---	---	---
	7	2	0	2	---	---	---	---	---	---	---	---	---
65-74	0	28	5	0	0.179	0.821	0.821	0.072	0.072	0.832	0.832	0.073	0.073
	1	23	5	7	0.217	0.783	0.643	0.086	0.091	0.812	0.674	0.089	0.095
	2	11	0	5	0.000	1.000	0.643	0.000	0.091	1.049	0.704	0.000	0.099
	3	6	2	2	---	---	---	---	---	---	---	---	---
	4	2	1	1	---	---	---	---	---	---	---	---	---
	5	-	-	-	---	---	---	---	---	---	---	---	---
	6	-	-	-	---	---	---	---	---	---	---	---	---
	7	-	-	-	---	---	---	---	---	---	---	---	---
All Ages	0	66	13	0	0.197	0.803	0.803	0.049	0.049	0.810	0.810	0.049	0.049
	1	53	7	9	0.132	0.868	0.697	0.047	0.057	0.889	0.719	0.048	0.058
	2	37	2	7	0.054	0.946	0.659	0.037	0.059	0.970	0.697	0.038	0.063
	3	28	6	7	0.214	0.786	0.518	0.078	0.069	0.805	0.557	0.079	0.074
	4	15	1	6	0.067	0.933	0.483	0.064	0.073	0.960	0.532	0.066	0.080
	5	8	1	2	0.125	0.875	0.423	0.117	0.085	0.895	0.477	0.120	0.096
	6	5	0	2	0.000	1.000	0.423	0.000	0.085	1.025	0.477	0.000	0.096
	7	3	0	3	0.000	1.000	0.423	0.000	0.085	1.034	0.492	0.000	0.099

TABLE 7B. LIFE TABLE FOR BRAIN INFARCTION FOR MEN: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

Age at Diagnosis	I	L	D	W	Q	P	CP	SEP	SECP	R	CR	SR	SCR
45-54	0	8	1	0	0.125	0.875	0.875	0.117	0.117	0.883	0.883	0.118	0.118
	1	7	0	0	0.000	1.000	0.875	0.000	0.117	1.020	0.901	0.000	0.120
	2	7	0	3	0.000	1.000	0.875	0.000	0.117	1.027	0.925	0.000	0.124
	3	4	1	1	-----	-----	-----	-----	-----	-----	-----	-----	-----
	4	2	0	0	-----	-----	-----	-----	-----	-----	-----	-----	-----
	5	2	0	1	-----	-----	-----	-----	-----	-----	-----	-----	-----
	6	1	0	1	-----	-----	-----	-----	-----	-----	-----	-----	-----
	7	-	-	-	-----	-----	-----	-----	-----	-----	-----	-----	-----
55-64	0	16	3	0	0.188	0.813	0.813	0.098	0.098	0.825	0.825	0.099	0.099
	1	13	2	3	0.154	0.846	0.688	0.100	0.116	0.877	0.725	0.104	0.122
	2	8	2	2	-----	-----	-----	-----	-----	-----	-----	-----	------
	3	4	0	1	-----	-----	-----	-----	-----	-----	-----	-----	-----
	4	3	1	1	-----	-----	-----	-----	-----	-----	-----	-----	-----
	5	1	0	1	-----	-----	-----	-----	-----	-----	-----	-----	-----
	6	-	-	-	-----	-----	-----	-----	-----	-----	-----	-----	-----
	7	-	-	-	-----	-----	-----	-----	-----	-----	-----	-----	-----
All Ages	0	33	7	0	0.212	0.788	0.788	0.071	0.071	0.801	0.801	0.072	0.072
	1	26	4	6	0.154	0.846	0.667	0.071	0.082	0.877	0.704	0.073	0.087
	2	16	2	5	0.125	0.875	0.583	0.083	0.091	0.907	0.636	0.086	0.099
	3	9	1	2	0.111	0.889	0.519	0.105	0.101	0.930	0.593	0.110	0.116
	4	6	2	1	0.333	0.667	0.346	0.192	0.120	0.706	0.416	0.204	0.145
	5	3	0	2	0.000	1.000	0.346	0.000	0.120	1.055	0.418	0.000	0.145
	6	1	0	1	0.000	1.000	0.346	0.000	0.120	1.029	0.405	0.000	0.141
	7	-	-	-	-----	-----	-----	-----	-----	-----	-----	-----	-----

TABLE 7B. LIFE TABLE FOR BRAIN INFARCTION FOR WOMEN: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

Age at Diagnosis	I	L	D	W	Q	P	CP	SEP	SECP	R	CR	SR	SCR
55-64	0	17	2	0	0.118	0.882	0.882	0.078	0.078	0.888	0.888	0.079	0.079
	1	15	0	1	0.000	1.000	0.882	0.000	0.078	1.016	0.904	0.000	0.080
	2	14	2	0	0.143	0.857	0.756	0.094	0.106	0.875	0.791	0.095	0.111
	3	12	2	3	0.167	0.833	0.630	0.108	0.120	0.855	0.676	0.110	0.129
	4	7	0	4	0.000	1.000	0.630	0.000	0.120	1.029	0.697	0.000	0.133
	5	3	1	0	-----	-----	-----	-----	-----	-----	-----	-----	-----
	6	2	0	0	-----	-----	-----	-----	-----	-----	-----	-----	-----
	7	2	0	2	-----	-----	-----	-----	-----	-----	-----	-----	-----
65-74	0	14	1	0	0.071	0.929	0.929	0.069	0.069	0.941	0.941	0.070	0.070
	1	13	2	2	0.154	0.846	0.786	0.100	0.110	0.880	0.827	0.104	0.115
	2	9	0	4	0.000	1.000	0.786	0.000	0.110	1.057	0.871	0.000	0.122
	3	5	2	2	-----	-----	-----	-----	-----	-----	-----	-----	-----
	4	1	0	1	-----	-----	-----	-----	-----	-----	-----	-----	-----
	5	-	-	-	-----	-----	-----	-----	-----	-----	-----	-----	-----
	6	--	-	-	-----	-----	-----	-----	-----	-----	-----	-----	-----
	7	-	-	-	-----	-----	-----	-----	-----	-----	-----	-----	-----
All Ages	0	38	5	0	0.132	0.868	0.868	0.055	0.055	0.876	0.876	0.055	0.055
	1	33	2	4	0.061	0.939	0.816	0.042	0.063	0.963	0.843	0.043	0.065
	2	27	2	5	0.074	0.926	0.755	0.050	0.071	0.955	0.803	0.052	0.076
	3	20	4	5	0.200	0.800	0.604	0.089	0.088	0.824	0.656	0.092	0.096
	4	11	0	6	0.000	1.000	0.604	0.000	0.088	1.028	0.671	0.000	0.098
	5	5	1	0	0.200	0.800	0.483	0.179	0.129	0.822	0.557	0.184	0.149
	6	4	0	2	0.000	1.000	0.483	0.000	0.129	1.025	0.549	0.000	0.147
	7	2	0	2	0.000	1.000	0.483	0.000	0.129	1.032	0.567	0.000	0.152

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Section 22. Incidence of Death from Cause other than Cardiovascular Disease by sex, age and level of characteristic at exam for 22 characteristics
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